

# More Just Sustainable Futures

*Artistic Research Symposium  
for PhD Students*



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# Introduction

Our symposium surprised even us. We were enriched and enlivened by the deep conversations that felt exceptional since it was the first time most people had met. We were lucky enough to get presenters from around the world to come together and connect for a short yet fruitful time. This e-publication results from this time of dialog and the long, intense research processes of the PhD students who presented.

We are grateful for all the presenters who gave their time, energy, and conscious contributions to the discussions. We are thankful to all the people involved in the process and all those who supported us along the way.

We present the work here, much of it with amazing imagery and all of it with depth, care, and insight. The symposium was under the broad theme of More Just and More Sustainable Futures and the 2021 subtheme of Multiple Ecologies, Diverse Ontologies. Diverse is the keyword here where the work talks about topics as wide ranging as industrial scale meat production, Brazilian Savannas, and Smart Cities.

The symposium itself ran somewhat differently than in person or many digital only events. We had presentations online for some time before the actual symposium for people to watch, think, marinate, and, then finally, develop questions and feedback<sup>1</sup>. We think this is partly to thank for the quality of conversation [we received] that took place. The co-directors each had questions for the panels that were never needed because the dialog was intense and sustained on its own.

Thank you for being a part in this journey, even if just as a reader.

Colette Campbell-Jones  
Kate Paxman  
Flounder Lee  
***Co-Directors, 2021 Symposium***

## Editors' Note

Most of the presentations and all the panels should still be available at [MoreJustFutures.Art](https://MoreJustFutures.Art), although this e-publication could outlast the website, if so, try searching [archive.org](https://archive.org) where much of this will be archived for the future!

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<sup>1</sup> This is a concept borrowed from the 2021 WiGiP/GiP Conference on Intercultural Philosophy

<sup>2</sup> Emilio Chapela's chapter was designed by Emilio

# Ecotonalities: Sound Practices for Listening with the Inhuman

Nik Forrest



*Inhuman Ecotonalities*: Lachine Canal in St. Henri, Tiohti:áke / Montreal, 2021. Images by Nik Forrest.

Sound is not just about hearing and responding, or communicating. It is about becoming aware of registers that are unfamiliar, inaccessible, and maybe even monstrous; registers that are wholly indifferent to the play of human drama. Sound is not only of the human, it undermines human exceptionalism; everything vibrates on some frequency and is touched by vibration, regardless of how imperceptible to human sensibility this might be (Kanngieser 2).

You are never the only thing sounding or listening. Sound vibrates across perceptible and imperceptible registers, linking matter and beings (both human and more-than-human) in unexpected ways that can disturb normative hierarchies and power relations. Attuning to the intimacy and depth of sound's disturbances requires forms of listening that exceed common sensing, extending attention and awareness beyond preconceived evaluations of good vs bad, or wanted and unwanted sound, and beyond extractive ways of listening based on the desire to consume and categorize. Can listening with uncertainty and curiosity to the unknown, the unfamiliar and even monstrous, foster more equitable, non-hierarchical ways of being with each other, with the non-human and with environments? Sound's emergent and relational characteristics can also work to disturb taken-for-granted oppositions between nature and culture, technology and biology, materiality and immateriality, making it a medium and practice especially well-suited to reimagining questions of non-conforming embodiment and subjectivity, as well as social and ecological relations more generally. This paper considers experimental sound practices – specifically listening and sounding

with Very Low Frequency signals (VLF) – in relation to Indigenous Studies and feminist perspectives on material agency and animacy, as well as queer, trans and non-binary theories of ecology and embodiment. Through these practices and ideas, I consider ways that encounters with sound might gather, reshape, and transform us as listeners who are vibratory and interconnected rather than isolated, fixed beings. As an artist and researcher working with sound installation, performance and collective listening, practices that can make palpable and perceptible entangled environments and bodies as co-emergent, forming/unforming materialities, I ask: how can sound and listening work to re-orient social and ecological relations?



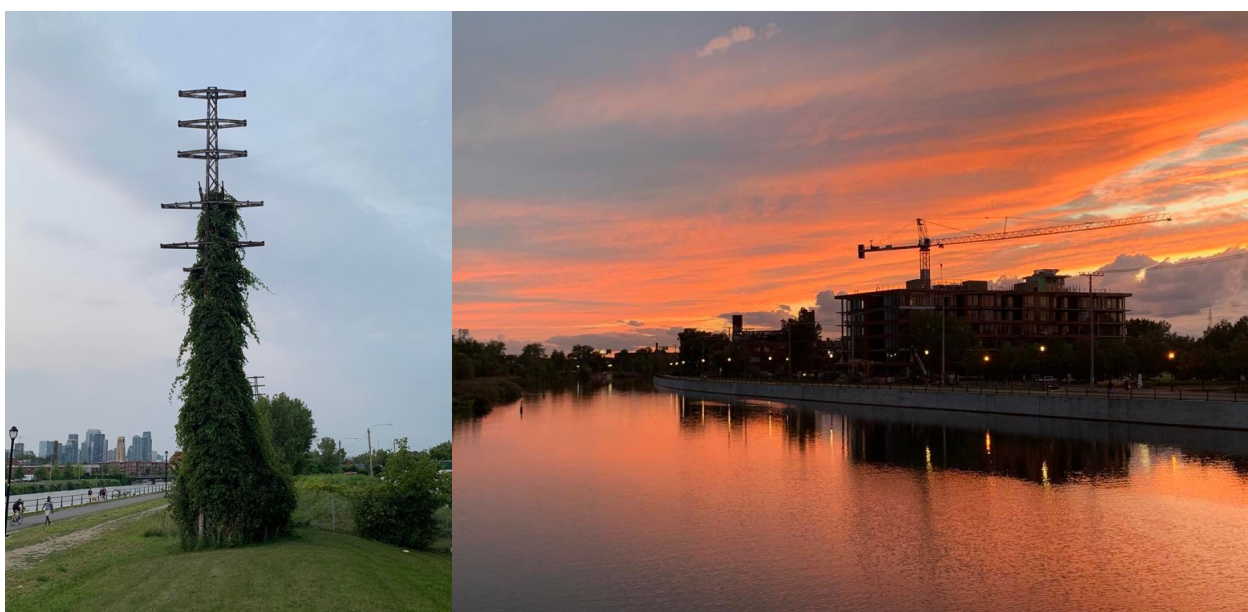
*Wild Intimacy: Sound to Light*, installation by Nik Forrest at Oboro Gallery, Tiohti:áke / Montreal, September 2018. Image by Paul Litherland. <https://soundcloud.com/nik-forrest/oboro-mix-aug31-copy>

As a white settler in Tiohti:áke / Montreal, a non-binary trans-masc person and sound artist, I'm always questioning my own practices of attunement to place, to the non-human, and to ways that bodies, subjectivities, histories and environments are interconnected. My approach is informed by wider conversations in Indigenous Studies reshaping how we think about human and more-than-human relations, decolonizing cultural and academic practices, and unsettling colonial forms of perception that maintain and reinforce extractive, hierarchical and anthropocentric power dynamics. Indigenous sound studies scholar Dylan Robinson talks about the shifting layers of "listening positionality" (38) that affect, influence and limit the way we perceive sound and music. Are there strategies and techniques that can bring into awareness the ways our listening has been shaped by colonial and cisheteropatriarchal structures of perception? And can we then begin to

listen with uncertainty and curiosity rather than simply for speedy extraction and consumption, with an underlying “drive toward knowledge fixity” (Robinson 60)? To resist overdetermined and taken-for-granted forms of settler listening, Robinson proposes more flexible practices that “situate listening as a relational action that occurs not merely between listener and listened-to, but between the layers of our individual positionalities” (58). This kind of intersectional listening, which Robinson describes as “a practice of oscillation”, breathes into sedimented layers and forms of perception, making space for the self-reflexivity and recognition of habits, privilege, and biases, crucial for moving toward “decolonial, antiracist, queer, and feminist listening practices” (Robinson 60).

Working with sound as an animate material and affective force, I’m actively trying to engage this kind of listening, including an awareness of the ways my perception has been formed and limited – sedimented – while consciously trying to become more inclusive, agile and experimental in how I listen. One of the ways I explore these ideas is through creative practice with sound associated with Very Low Frequency (VLF) signals, the usually imperceptible electromagnetic waves that emanate from the urban electrical grid, architectural wiring, power lines, electronic equipment and appliances, as well as from atmospheric phenomena like lightning, aurora borealis, and so-called “space weather” associated with solar flares and winds. VLF signals are similar to AM or FM radio carrier waves, but they oscillate at a much lower frequency (VLF = between 3 and 30 kHz, whereas FM = 88–108 MHz in North America). To hear VLF you need an antenna-receiver to gather and filter the signal, plus an amplifier and speakers or headphones. The sound of these emissions is captivating both for its aesthetic qualities (the texture, tone, and stochastic rhythmic patterns) and for its conceptually disruptive potential, confounding categorical boundaries between “natural” and “technological”, audible and inaudible, human and non-human. Reimagining this practice through Robinson’s insights attunes me to the understanding that, at some level, all recording is extractive. I don’t know how to resolve this, since collecting audio and VLF samples is a key part of my practice, but the question changes the way I approach recording: rather than going out to get a particular sound I try to listen with a place, with what is there, and what is already happening, following the sounds I encounter via the extended listening offered by microphones and VLF antennas. Long-term and repeated listening with locations also helps to shift the dynamic from capture to encounter. Rather than knowing in advance what I’m after, or trying to capture “pure” sounds, I work with the inevitably entangled combinations of signal and noise that I meet.

In the ongoing project *Inhuman Ecotonalities*<sup>1</sup> I engage with familiar locations in my neighbourhood in Tiohti:áke / Montreal where human and non-human sonic ecologies overlap and mix in unexpected ways. St. Henri, just southwest of the downtown core, is an area undergoing rapid gentrification. The Haudenosaunee and Anishinaabeg peoples have long ties with this area and with the entire island, and after colonization St. Henri became mainly a French-Canadian, Irish, and Black working-class neighbourhood, with factories, leather tanneries, cargo storage and shipping infrastructures. The Lachine Canal that runs through the area has until recently been a highly polluted industrial site. The now tree-lined and re-greened canal, used as an outdoor recreation space, feels less urban than the surrounding area, even though it's artificially constructed. At the same time, abandoned industrial structures and the cleaned-up banks of the canal itself have been taken over by vegetation, birds and animals, resulting in a sonic ecology that combines a rich variety of human and non-human sounds. Through the kind of technologically extended listening mentioned above, as well as embodied Deep Listening drawing on Pauline Oliveros' methods, I engage repeatedly with the same location. I then work with layered audio and VLF samples to develop sequences and compositions, drawing out, amplifying and reproducing especially resonant frequencies, to sound and resonate along with the tones (both human and non-human) I encounter in the recordings.



Canal Lachine in St. Henri, Tiohti:áke / Montreal, 2021. Images by Alanna Thain.

While thinking and listening with the non-human in these locations I am also aware of the ongoing presence and vital knowledges of Indigenous scholars and artists, especially around questions of ecology, the environment, and the rich, long-term understandings of entangled kinship

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<sup>1</sup> Andra McCartney talks about “ecotonal listening” as an attunement to ways that sounds overlap in any listening context, a critique of traditional approaches to acoustic ecology that value the pure tones of so-called “hi-fi” soundscapes over the noisy multiple frequencies of “lo-fi” soundscapes (McCartney 2010).

relations with the more-than-human associated with many Indigenous epistemologies. As such, my thinking about questions of sonic materiality and agency has also been influenced by other Indigenous scholars like Kim TallBear and Zoe Todd, who link the intimacy of knowledge structures to relations of power and embodiment, opening critical perspectives on lived experience of difference within limiting, exclusionary and oppressive colonial regimes. My own situated listening, for example, is inseparable from how it feels to live as a trans masc person who is also a settler in this area. Historically, queer and trans bodies have been pathologized as “unnatural” and inhuman, but TallBear’s critical perspectives challenge human exceptionalism and opposition between nature and culture. Todd points out that continuing to credit white European theorists with inventing the idea of non-human sentience and agency, and continuing to present and consume this way of thinking as if it were entirely original, erases traditional Indigenous knowledge systems and contemporary Indigenous scholarship that include these ideas. For Todd, “[w]hen we cite European thinkers who discuss the ‘more-than-human’ but do not discuss their Indigenous contemporaries who are writing on the exact same topics, we perpetuate the white supremacy of the academy” (Todd 18). To broaden the spectrum of who we think with, listen with, cite and therefore reaffirm is an essential part of decolonizing the academy, based as it is on dominant Western epistemologies. Resonant with the ways that Robinson asserts the importance of becoming aware of listening habits, privilege and shifting positionalities, Todd points out that “we must consider our own prejudices, our own biases ... [and] consider why it is so revolutionary for Sara Ahmed (2014) to assert a ‘citational rebellion’ in which we cite POC, women and others left out of many academic discourses” (Todd 19). Structures of perception, knowledge and academic research reproduce hierarchies of exclusion unless we develop and carry out practices of listening, thinking and referencing otherwise. Feminist new materialist perspectives on sex, gender and ecology that foreground the entangled, indeterminate and co-emergent character of bodies and environments challenge cisheteropatriarchal, anthropocentric and colonial hierarchies and categorizations. But TallBear echoes Todd’s point that contemporary Western theories of materiality and the non-human can’t be understood as entirely new: “indigenous peoples have never forgotten that nonhumans are agential beings engaged in social relations that profoundly shape human lives ... ‘Objects’ and ‘forces’ such as stones, thunder, or stars are known within our ontologies to be sentient and knowing persons” (TallBear 243). Indigenous knowledge and kinship systems, as reflected in the Dakota storytelling practices TallBear references, avoid the binary oppositions of Western epistemologies and the hierarchical and extractive attitudes that follow; attitudes that have, as TallBear explains, “enabled domineering human management, naming,

controlling, and ‘saving’ of nature” (235). TallBear links these controlling, extractive attitudes with limiting, colonial definitions of sex, that have “been defined according to a nature-culture divide” (234). The authority of western scientific discourse – “whitestream disciplinary thinking” (TallBear 230) – has rendered both sex and nature as “discrete, coherent, troublesome, yet manageable objects”, limiting definitions that are central to “ideas of purity and contamination” (TallBear 235). Hierarchical categories and idealized notions of purity vs contamination and nature vs culture are key to ecological and social struggles including questions of sex, embodiment and gendered subjectivity. TallBear’s insights model how the never fully contained animacies and boundary-crossing characteristics of sound resonate with the unsettling of normative understandings of bodies, sex and gender as fixed rather than emerging, dynamic materialities.

Queer, non-binary feminist approaches to materialism reconsider the importance of matter in social, political and ecological relations, and the implications this has for all forms of subaltern subjectivity and embodiment, echoing TallBear’s insights. For example, Mel Chen’s concept of animacy, or “the fragile division between animate and inanimate ... [that] is relentlessly produced and policed” has crucial biopolitical consequences (2). Inequitable power relations among humans, non-human others and matter of all kinds are at stake in the hierarchical divisions that undergird traditional Western perspectives. Bringing together critical race, animal studies, critical disability studies, affect and queer of color theory, Chen demonstrates the ways that animacy works to position people as more and less human, and to maintain boundaries between sensate and insensate matter. As Chen articulates, for those bodies considered “wrong” like trans and non-binary bodies, differently-abled, and racialized bodies, rethinking the animacy of all materiality – including the body itself in relation to its social and environmental surroundings – has urgent political ramifications. For example, once the body is reanimated, and understood as a dynamic form emerging in a field of social, environmental, material relations, naturalized binary sex and gender can no longer be understood as absolute or fixed. Creative practice with sound as it continues to unfold and transform with and through bodies and environments is one way to explore this. What we hear in any situation is highly affected by the complex field of material and social forces that shape listening. When we listen together, all of our “listening-positionalities” come into play along with the attenuating, absorbing, reflective, resonant and vibratory effects of material surfaces, bodies, architectural structures and spaces. We can sense these effects as well as sound’s movement through time and space in tonal qualities, echoes, delays and reverberations. Sound studies scholar and artist Douglas Kahn terms this “transduction”: “[S]ounds can be heard as having acquired their character through the course of their propagation ... a

sound is as much of the intervening space as it is from the source ..." (Kahn 162). Through attentive listening, we can perceive "... the influence of objects and artifacts, modulation and media (e.g., rock, air, Internet), and the time required by distance" (Kahn 162). When we listen with audio and VLF signals in performance or installation, we can hear the attenuating effects of different bodies and materials, as well as the interaction between the body's electromagnetic field and the ambient electromagnetic signals.

Like the sound in any listening situation, such as my VLF performances, matter itself is an emerging process. Karen Barad explains "There is no fixed essence or substance simply there for the measuring. Mattering is about the (contingent and temporary) becoming-determinate (and becoming-indeterminate) of matter and meaning, without fixity, without closure" (Barad 254). What may seem solid, fixed, or fully knowable (like a body, object, or sound itself) is in fact always in process. If, as they suggest, "what comes to be and is immediately reconfigured entails an iterative intra-active becoming" (Barad 248), then the processual emergence of bodies, sounds and environments can be understood as necessarily entangled and intra-acting. In my sound performances using pre-recorded VLF and regular audio samples mixed with live signals, the combined sounds and signals continue to interact with each other and with the materials, structures and bodies present in the listening space, making palpable the emergent and intra-active becoming of both sounds and bodies. The technical affordances of the antenna-receiver and digital software for live mixing and processing of both the pre-recorded samples and live signals enables a co-composition with sound as it continues to reverberate, mutate and transform with and through the material space of the performance. Since the presence and proximity of bodies in any listening environment, and specifically near VLF antennas, also modifies what is heard, the performances enable listening to entangled, intra-acting bodies, atmospheres, materials and environments.

VLF signals challenge ordinary perceptions of time and space, since they can traverse very long as well as very short distances, moving much faster than ordinary sound waves. For example, the lightning strikes that generate VLF sounds heard in a given location may be occurring nearby, on the other side of the globe. Sometimes called "natural radio", enabling attunement to the normally imperceptible registers of non-human cosmic and atmospheric transmissions, VLF can be understood as a kind of non-human media, sending back reports of other time-places and other kinds of embodiment. As cities and their infrastructures become denser, and as climate changes and weather events intensify, VLF signals are affected, enabling a heightened form of attunement through extended listening to these transformations.



Recording VLF in Grasslands Nation Park, Saskatchewan, Canada. 2019. Images by Alanna Thain.

Listening through contemporary trans studies that link perception to embodied, entangled subjectivity, I build on Kahn's idea of sonic transperception to include the extended sensing otherwise that is part of trans experience. Theorist Cael Keegan suggests that sensing something that others miss is part of trans survival: "transgender people have had to craft imaginaries that sustain our desire to become, our belief that we might come into perception differently" (Keegan 2). For Keegan, the trans-imagination and trans-sensing that re-orient and exceed normative sensory regimes are techniques for survival in a world that may not recognize us in the ways that we experience ourselves. Through my sound performances and installations I also want to suggest that attuning to normally imperceptible registers of non-human transmissions, sensing more than is usually apparent, and listening *otherwise* to bodies and environments as entangled, transforming ecologies, may also be considered strategies for survival. How do the performances and installations enact transperception and "craft imaginaries that sustain our desire to become"; what kind of space is opened, and what comes into perception differently in the multiple forms of extended listening they invite that traverse sensing, imagination and memory?

Listening and sensing across perceptible and imperceptible registers for what might become possible has disruptive as well as generative potentials. In her recently republished piece "Spiderwomen", poet and trans theorist Eva Hayward poetically explores the way that trans bodies emerge in relation to social, architectural, chemical and material environments, like the San Francisco neighbourhood she lived in during her own transition. Hayward describes the social, material and affective forces that generate the milieu for emerging trans embodiment and subjectivity and invokes the idea of transposition – to change something's form or to transfer something from one context to another – linking transition's rearranging, re-orienting and disruptive potentials with place.



Power Lines, St. Henri, Tiohti:áke / Montreal, composite image by Nik Forrest, 2020.

Transposition can be a deviation that discomposes order—transpositions are equally as destructive as they are generative ... I want to suggest that sexual transitions (for my purposes, particularly transwomen's) are fused with, and perhaps constituted by, forces and excitations of location, of neighborhood ... for me, transpositions refer both to the sensation (a composite of affects and percepts) of bodily change and to the corporeal states constituted through transsexual transitions, which are all shaped by spatial and environmental orientations (Hayward 255).

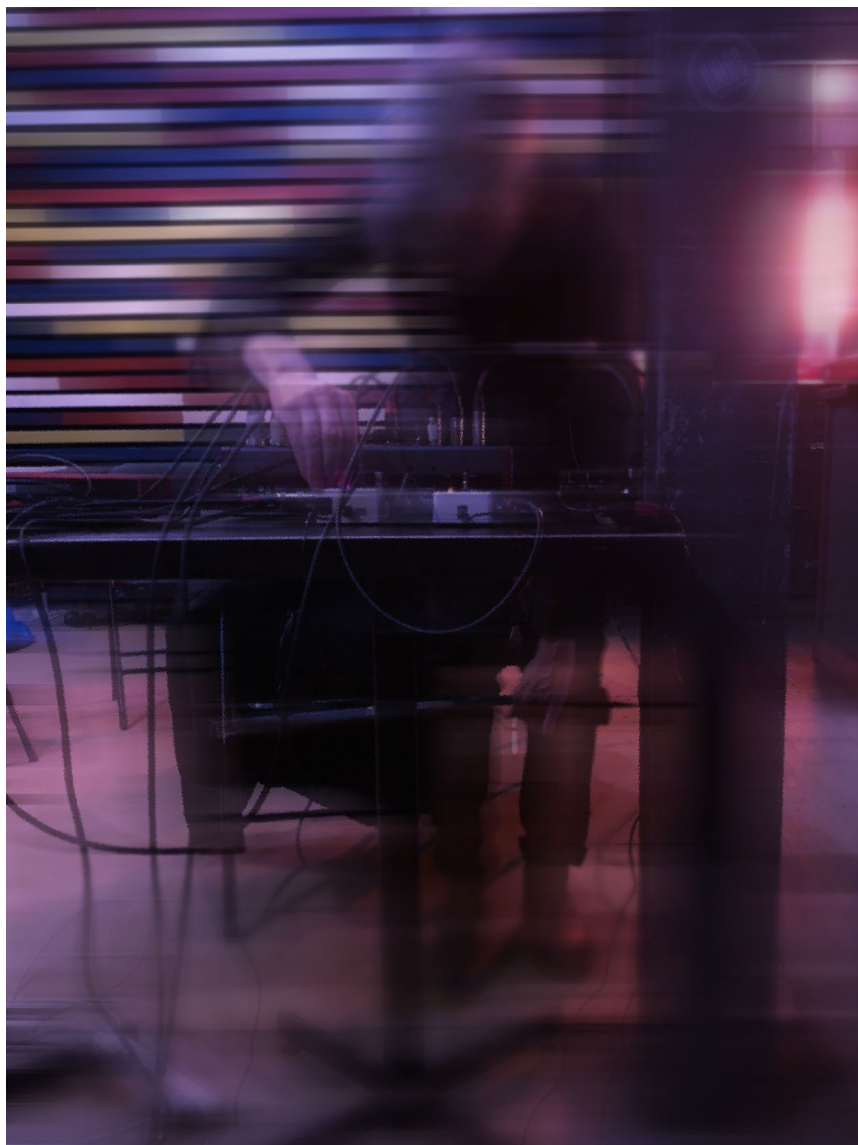
For Hayward, where and how the sensorium is re-positioned and re-figured during the process of transition – or transpositioned in relation to place and milieu, body and location – are crucial considerations. The sensing otherwise that comes with transition's "radical alterations to bodily sensoriums" (Hayward 258), and the extended techno-human-non-human listening with VLF signals that I assemble in sound performances and installations, are, I'm suggesting, both forms of transperception: extended, altered modes of sensory reach that exceed normative limits.

Transition gathers and rearranges the material, physical, sensual and social self in relation to, and entangled with, its surroundings. It is, as Hayward suggests, "the constitution of a relational milieu, an in-between site through which conductivities and energies form bodiliness through limits of expressiveness or responsiveness ... an arrangement between the sensorial milieu of the self and the profusion of the world" (262). In Hayward's poetic evocations, trans-ness emerges as a vibratory

and resonant improvised co-composition (like sound), between the body, the social, the technical, and the environmental; a creative engagement and intensification of materiality and sensation that allow the trans body to “resonate otherwise” with and through the surroundings (274). As I walk around my neighbourhood, VLF opens my perception to the unfamiliar and unknown, intensifying my relations to my surroundings. By reaching toward that which exceeds habitual sensing, by following rather than simply extracting sound, not deciding in advance what is valuable and worth listening to, these practices challenge the fixity of what I know. Listening with uncertainty, I become vulnerable but also more highly attuned to the multiple and shifting ways that bodies, technologies and environments are entangled. Listening for the resonances between sensing and transition across trans studies, sound studies, Indigenous studies, gender studies and critical materialisms, I ask – how do our encounters with sound, with each other, and with our surroundings through listening, work to reshape, transform and transfigure all of us? Through the research-creation practices described here I am seeking ways to explore sound and listening as socially and politically unsettling, enlivening, vibratory, and rearranging forces that can decompose existing orders, tremble the boundaries of things as they are, suggesting other forms of extended sensing and possibilities for the shape of things to come.

## Biography

Nik Forrest is an interdisciplinary artist based in Tio'tia:ke/Montreal. Their practice includes experimental sound performance, installation and composition, as well as experimental video and video installation. Their recent projects explore the ecological potentials of sound and listening as techniques to heighten attunement to entangled human and non-human materials, bodies and forces, and to the interconnected affective, social and environmental relations. They are currently working on a PhD at Concordia University in the interdisciplinary humanities program.



Previous page: Nik Forrest, *Sonic Thresholds*: sound performance with VLF, Bar Le Ritz, Tiohti:áke / Montreal, 2019. Original photo by Nancy Tobin, composite image by Nik Forrest.

## Works Cited

- Barad, Karen. "Quantum Entanglements and Hauntological Relations of Inheritance: Dis/continuities, SpaceTime Enfoldings, and Justice-to-Come." *Derrida Today*, 3.2, 2010, pp. 240–268.
- Chen, Mel. *Animacies*. Duke University Press, Kindle Edition, 2012.
- Hayward, Eva. "Spiderwomen." *Trap Door*, edited by Reina Gossett, Eric A. Stanley and Johanna Burton, MIT Press, 2017, pp. 255–279.
- Kahn, Douglas. *Earth Sound Earth Signal: Energies and Earth Magnitude in the Arts*. University of California Press, 2013.
- Kanngieser, AM. "Geopolitics and the Anthropocene: Five Propositions for Sound." *GeoHumanities* 1(1), 2015. <https://doi.org/10.1080/2373566X.2015.1075360>.
- Keegan, Cael. *Lana and Lilly Wachowski: Sensing Transgender*. University of Illinois Press, 2018.
- McCartney, Andra. "Soundscape Composition and the Subversion of Electroacoustic Norms." *eContact!* 3(4), 2010. [https://econtact.ca/3\\_4/SoundscapeComposition.htm](https://econtact.ca/3_4/SoundscapeComposition.htm) (accessed 12 August 2020).
- Robinson, Dylan. *Hungry Listening: Resonant Theory for Indigenous Sound Studies*. University of Minnesota Press, 2020.
- TallBear, Kim. "An Indigenous Reflection on Working beyond the Human/Not Human." "Theorizing Queer Inhumanisms: The Sense of Brownness" edited by José Esteban Muñoz. *GLQ: A Journal of Lesbian and Gay Studies*, 21(2–3), 2015, pp. 230–235.
- Todd, Zoe. "An Indigenous Feminist's Take on The Ontological Turn: 'Ontology' Is Just Another Word for Colonialism." *Journal of Historical Sociology*, 29(1), 2016, pp. 4–22. <https://doi.org/10.1111/johs.12124>.

# The hidden and forgotten cerrado plants in São Paulo

## Art and activism in more-than-urban landscapes

André S. Bailão

I want to invite you to travel briefly with me, looking for some urban weeds in the city of São Paulo, Brazil. First, we take the subway and come out in the Vila Madalena station in a middle-class neighborhood. As the escalator ends at street level, what kind of more-than-human multispecies encounters will we find in this area? We find ourselves immersed in what feels like a typical urban landscape. The station is located inside a bus terminal, next to two busy avenues. The sloping hills surrounding it give us a grasp of the city's topography, now almost completely covered by the built environment. Throughout its history, the metropolitan region of São Paulo spread up and down the undulating hills and valleys in what is called the Brazilian Highlands (*planalto*), an area very rich in watercourses. Leaving the station and walking down a nearby avenue, Avenida Pompeia, we can feel this steep landscape, carved through millennia by rivers and creeks. As in most megacities, they have been covered with concrete and asphalt but sometimes burst out of their regulated underground canals during storms, flooding the lower area downhill.

This is the stolen land of the Guarani peoples, who are still resisting and fighting for their land rights in the metropolitan region, some of them living in the smallest indigenous reservation in the whole country.<sup>1</sup> In the nineteenth century this particular area around the Vila Madalena station was located just outside the old colonial center and turned into a mosaic of ranches and gardens for settlers, until the 1940s and 1950s when it was engulfed by the city and settled by families of working-class migrants, mostly from Italy. They are the reason why many streets and areas here have Italian names—starting with the avenue itself, Pompeia. It is quickly gentrifying, and old brick houses and shops stand side by side with newer complexes for the upper-middle class.

Despite this somewhat gray description of the urban landscape, we are set to explore its greener cohabitants that spontaneously grow on the built environment. There has been a long tradition, according to geographer Matthew Gandy (2013) and ecologist Herbert Sukopp (2002), since at least the seventeenth century, of urban explorers looking for spontaneous nature in cities, including the publication of floras and guides describing botanical species in walls, ruins, pavements, and roads. Lachmund (2003) and Sukopp (2002) show how post-war European cities became the stage for studies of ruderal flora growing and flowering in bombsites and ruins. All across the world this urban vegetation has received attention from different groups of people, despite being considered marginal to the utilitarian and capitalist attitudes and modes of inhabiting our cities. For anthropologist Bettina Stoetzer (2018), the cracks in our cities and the plants that sprout in them allow for encounters between people and the invisible ecologies of urban weeds, creating possibilities for cultural analysis and the study of more-than-human cities beyond our categories of urban/natural.

A type of urban exploration, between art and environmental activism, nature writing and academic curiosity, has been recently on the rise, in practices attuned to an 'alternative sensibility toward nature that eschews either a narrow scientism or a neo-romanticist attachment to the idea of pristine wilderness' (Gandy 2013: 1301). In the UK, nature writer Richard Mabey has spent decades

1 For a news article in English on the Guarani people's recent struggles in São Paulo, see Locatelli 2017.

walking around and writing about brownfields and wastelands around London, or what he has called the 'unofficial countryside' (Mabey 1973, 2010); and Richard Reynolds has started a movement of illicit cultivation of plants in London called 'guerrilla gardening' (Reynolds 2008). Anthropologists such as Stoetzer (2018) and Natasha Myers (2017, 2019) have been engaging with plant–people encounters in different cities, including Toronto, Vienna, Singapore, and Berlin, including several 'counter-' or guerrilla gardens.

Like other major cities, São Paulo has seen a rise of grassroots movements of urban agriculture, analyzed by anthropologist Mariana Machini (2018); and several urban explorers have been studying and writing online and publishing guides on edible weeds and non-conventional plants scattered around the city.<sup>2</sup> In the arts the visual artist Laura Lydia spent the first half of the 2010s exploring tiny weeds growing among the asphalt in São Paulo, filming the city from their low-lying perspective for her project *Ervas sp* (Lydia 2015), which is available on YouTube, and artist Daniel Caballero has made a field guide and a website for exploring savannah plants in the metropolis (Caballero 2016)—the subject of this short chapter, as I discuss further below. I am inspired by these modes of nature writing in the city and how these explorers can help me thread through urban nature.

Going back to our walk in São Paulo, trees are the most obvious elements we can see, as they stand tall, lining streets and small city parks otherwise mostly covered by patches of monotonous grasses. There are many tropical and subtropical trees planted by neighbors and the city government, some with quite unintentional effects, as we feel the broken pavement rising and falling above their strong roots. Some are native species, while others were introduced from other tropical regions; the ones that catch my attention are fig trees from India, eucalyptus from Australia, and the African flame tree (*Spathodea campanulata*) and the flamboyant tree (*Delonix regia*), both with their orange-colored flowers. Their presence indicates the intense exchange of tropical plants that followed imperialism, as the Brazilian purple jacaranda (*Jacaranda mimosifolia*), very common in São Paulo, famously dots the urban landscapes in Pretoria and Sidney.

However, if we look down rather than ahead or up, we can see a collection of weeds, ferns, and tiny flowering plants growing on the sidewalk. Many of them have arrived unintentionally from Europe and Africa, alongside settlers, enslaved people, and their animals. They include the dandelion (*Hypochaeris radicata*) and the common purslane (*Portulaca oleracea*)—two extremely common Old World edible weeds I see in almost every crack close to my house. My very first memory of a plant is a naturalized weed from Asia, now widespread in all tropical regions: the red cupid's shaving brush (*Emilia sonchifolia*), which grew spontaneously in the lawn in front of my school. Some of these weeds are very fond of storm drains and the accumulating moisture, especially after it rains—quite common in this city, known in the rest of the country as the 'land of the drizzle' (*terra da garoa*). This characteristic is changing fast due to local, regional, and global climate change processes.<sup>3</sup>

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2 The term Non-conventional Edible Plants (or *PANCs*—*Plantas alimentícias não convencionais*—in Portuguese) has been proposed by a Brazilian researcher, Valdely Kinupp, to describe edible plants or plant parts that are not conventionally consumed or commercially explored in any area. Activists, urban explorers, and guerrilla gardeners have been using the term in the last few years in Brazil.

3 The Metropolitan Area of São Paulo is seeing a recent trend of climate change, such as stronger storms and longer dry spells, associated with a variety of causes (Marengo et al. 2020). The city went through a harsh drought in 2014 and 2015 and a water crisis ensued, following a series of mismanagements by the local, state, and federal governments and the water and sanitation agencies. For a climatological analysis on the water crisis and the extreme dry event of 2014 and 2015 see Nobre et al. (2016). As I write there might be another crisis looming, as Central Brazil is drying up fast.

Following one weed after another we leave the buzzing and pollution from the traffic behind and walk into a city park, where things change rather dramatically. The temperature changes, as well as the level of noise. The park is filled with trees of several species and families. But I want us to look for urban weeds, so instead of focusing on the panorama, we keep on walking, looking down. We arrive at a group of rocks, where we see some cactuses and bromeliads and there is a path zigzagging over a dusty red soil (figure 1).

In comparison to most official city parks, this area feels different; it is chaotic and unrestrained. We find sun-loving grasses of several species, shooting their flowering branches toward the sky: a wild pineapple, cactuses, tiny orchids, and a few tortuous trees and palms and sprawling flowering bushes, some of them with sharp thorns and needle-like leaves. There are several signs dotted around this messy garden, and they inform us that this is called the *Cerrado Infinito*, or Infinite Brazilian Savannah (figure 2).



Figure 1. Photograph by the author, 2019.



Figure 2. Photograph by the author, 2017.

This is an artistic-urban environmental project with many different species of savannah plants, which was started in June 2015 by artist and urban explorer Daniel Caballero. Since its creation, the project has been constantly growing with the help of friends and neighbors. From Caballero's urban explorations in search of surviving patches of *cerrado* plants around the city, he has gathered a collection of plants, which he then replants in this chaotic path surrounded by the neatly trimmed grasses of the city park. In order to aid visitors he has created signs with his own drawings and accompanying botanical information. He also wrote a short book describing the ideas behind the project and to be used as a field guide for exploring *cerrado* plants in cities, with names, stories, descriptions, uses, and his own botanical illustrations—in order to 'decolonize' (Caballero 2016). Caballero connects to a long tradition of nature writing, 'a heterogeneous ground that draws together aspects of popular science, vernacular landscape culture, and a wider sense of curiosity or enchantment with everyday objects and spaces' (Gandy 2013: 1301).

I have been visiting it since its inception. The short tour in this essay, engaging with a different set of urban weeds, is based on these encounters in the past six years. Walking around the *Cerrado Infinito*, talking with Caballero and reading his work and the literature around urban nature explorers, I ask: what kind of ecologies can we find in a city? What kind of sensitivities do these plants generate in us, when we engage with them? How are these urban ecologies related to common classifications of plants and landscapes in Brazil? What stories do weeds and small plants and grasses tell about the city? As an anthropologist interested in the engagements between plants and people, I am interested in the interplay of human and more-than-human elements, flows and fluxes in the creation, transformation, and imagination of landscapes (Ingold 2011; Myers 2017, 2019; Tsing 2015; Tsing et al. (eds.) 2017).

The ongoing debate in the environmental humanities and social sciences on the proposed age of the Anthropocene stresses how the ruined landscapes most of us now live in are haunted by a multitude of ghosts, traces, and vestiges of more-than-human stories and materials (Gan et al. 2017). But if these stories start in the middle of ruins, they don't have to end with decay and abandonment but rather with the possibilities of life that sprout among them (Tsing 2015; Stoetzer 2018). Natasha Myers has written about how 'counter-gardens' in the middle of cities offer possibilities for other relationships between plants and people to thrive and flourish, even in the midst of ecological disruptions of the Anthropocene (Myers 2019: 116–124). Caballero's *Cerrado Infinito* is one such possibility. In the midst of the 'concrete jungle' (*selva de pedra*), there are other stories to be told, stories about a city of weeds.

### **A *cerrado* in the metropolis**

The *cerrado* is sometimes translated as the Brazilian savannah. The word was originally an adjective meaning 'dense' or 'enclosed' in Portuguese, referring to the bush or scrubland vegetation dotted with tortuous trees. When capitalized, *Cerrado* is a broad term given to an ecoregion of several vegetation types in Central Brazil, where summers are rainy and winters very dry, from open grasslands to savannahs and dry forests, some of them adapted to anthropogenic fire regimes in the *longue durée*. It originally comprised over a fifth of Brazilian territory, being the second-largest ecoregion after the Amazon, but today it is one of Brazil's most devastated and least protected landscapes after the advancement of mining, soybean production and cattle farming. As happens

to most grasslands, there has been a material silencing in conservation efforts, favoring tropical rainforests (Bardgett et al. 2021).

Although for foreign readers the feeling might seem difficult to grasp, for most Brazilians the presence of a *cerrado* in this particular city feels uncanny or out of place—like a Highlands moorland in the middle of London, for example. São Paulo is located close to the Atlantic coast and has been officially classified as part of the coastal rainforest (*Mata Atlântica*) biome. For some people walking through the *Cerrado Infinito*, one of their first engagements is to say that they never thought that the *cerrado* was to be found around here, they thought about it as part of the drier inland highlands.

The background of *Cerrado Infinito* was a series of artistic explorations around the city, as Caballero was trying to explore what urban nature might be, feel, and look like in this megacity. He started to engage with a whole world of marginal urban ecologies in abandoned and unoccupied lots—*terrenos baldios*. This Portuguese expression means a worthless or unused lot or unlabored land. It refers to a vast collection of spaces, from vacant lots to urban wastelands and brownfields, or land with uncertain ownership, and comparisons to the French *terrains vagues* are fruitful (see Barron 2014; Enderson 2008; Gandy 2013: 1302; Solà-Morales 2014). But unlike the more open and polysemic *vague*, *baldio* usually has negative connotations, more similar to the unproductive ‘wasteland’ in English. It is common for city-dwellers to avoid these places, fearing crime and the menacing presence of disease-carrying and venomous creatures such as the recent surge of Brazilian yellow scorpions (*Tityus serrulatus*) in São Paulo (Pimenta et al. 2019). Despite the common negative perception of these spaces—as emptied, abandoned, derelict, dead—they are actually filled with possibilities (Barron 2014: 3; Enderson 2008; Gandy 2013; Solà-Morales 2014 [1993]). All around the world, urban explorers and researchers have been paying attention to them, seeing ‘empty’ lands filled with things and life forms. As Richard Mabey once said: ‘It is not the parks but the railway sidings that are thick with flowers’ (Mabey 1973: 12).

With some research and the help of a few biologists, Caballero found out that these *terrains vagues* were filled with plants typical of the open grasslands and savannahs of the *Cerrado* ecoregion, including rare and delicate species. Popular parks and reservations, filled with large trees, offer too much shadow, too fertile soil, or a carpet of aggressive grasses. Focusing on the urban *cerrado* plants permutes our ideas of nature into more complex and messier sites of weediness, the ruinscape between the organized market and pristine wilderness (Tsing 2015, Carse 2019). Caballero defines the urban *cerrado* as the original *terrain vague*, almost like an undercity coexisting with the city (Caballero n.d.). It confounds any notion of urban nature as a distinct background to our cities (Stoetzer 2018): these plants are not apart from but part of the city; they are ubiquitous and take advantage of every possible space to grow.

Bettina Stoetzer explores the ‘ruderal perspective’—after the Latin word for plants living in ruins or in the rubble—to understand how the rubbles in our cities generate unexpected, unplanned life, unnoticed when we only look at the built environment (Stoetzer 2018). This resonates deeply with how Caballero defines his own practice as a ‘ruderal art’. ‘Weeds’ filaments of life seem as persistent and pervasive as myths. They survive, entombed in the soil, for centuries’ (Mabey 2010:

44). Some stories circulate of how *cerrado* plants unexpectedly pop up when a building and its surrounding trees are torn down at a construction site, their dormant seeds taking advantage of a new sunlit field or brought to one by the wind or animals. From his explorations Caballero created a group of installations in art galleries and museums with living plants.



Figures 3.1, 3.2. Two lantanas—cricket-corn in vernacular speech. Photographs by the author, 2021.

The *Cerrado Infinito* was then born of the idea of transplanting these installations to an open area, and, being a neighbor of the *Praça da Nascente* and friends with some of the people involved in creating the pond there, he chose the park as an ideal spot. The hill where the path is located was completely covered by an exotic invasive species of grass that dominates most parks and lawns (*Brachiaria sp.*). The chosen hill faces north, which makes it sunlit year-round, and it has a red clay soil filled with rocks and boulders, showing a trace of its past ecologies. Away from the shadow of the bigger trees and the darker fertile soil from the area around the pond, this was a perfect spot for open grasslands and savannah plants (figures 3.1, 3.2).

### **Senses and sensitivities in ruderal landscapes**

To discuss the multiple ecologies in our ruined worlds, these creeping, low-lying plants demand different ways of engaging with them. Writing on landscapes of the Anthropocene, anthropologist Anna Tsing talks about how we must learn to tell better landscape stories with different characters, including more-than-human beings, to learn how to live in our damaged worlds (Tsing 2015). Bettina Stoetzer tells us that in order to explore urban weeds, we must learn to be carefully ‘inattentive’, looking for unexpected ecologies at the edge of the city (Stoetzer 2018).

In order to care for these plants we must move our gaze away from the broad views and

panoramas common to the canonical production of sublime and picturesque landscapes (see Bailão 2021), which mostly rely on broad, ample views and the presence of trees. These plants demand a more creeping attention, where their fine details and textures invite us to a slow interaction. Visually registering them is hard, their openness under the stark tropical sunlight makes it difficult to photograph the subtle color contrasts between plants. In person, they lower our sight and bodies, inviting them towards the ground. The Brazilian artist Laura Lydia has spent years exploring these low-lying sensitivities, which can be seen in her video *Ervas sp* ('Weeds sp'—both for 'species' and the acronym for 'São Paulo') on YouTube, in which we can experience the city among the cracks; its noises—conversations of people, children playing and the traffic—always focused on the perspective of the weeds, close to the ground (Lydia 2015). In order to be attentive to *cerrado* plants, we have to learn from these types of engagements.

Visiting it at different seasons provides different sensorial experiences. While tropical rainforests have been historically compared to an eternal spring, the *cerrado* is typical of the Brazilian Highlands, where there is a sharp contrast between rainy and dry seasons. Walking through it, we can feel, see, smell, and touch a changing variety of colors and textures, as some of them dry out in the winter, leaving behind thorny trunks, and some have harsh, brittle leaves well adapted to the long dry spells that are becoming more and more common in this city deeply affected by the changing climate. In a drying city, it is not impossible to imagine the *cerrado* plants thriving and advancing in every crack and abandoned lot as winters become drier and warmer, and spring and summer rains take longer and longer to arrive each year. Sukopp states how studies of urban flora have been showing since the nineteenth century that microclimatic and soil conditions in cities favor plants from 'warmer' areas (Sukopp 2002: 80).

The trail provides an ever-changing experience, as an untamed garden. Year after year different plants are planted here; many of them die out, some arrive by wind or are brought by birds or pollinators. These non-human companions increase in number as different *cerrado* plants take root in the path, attracted by flowers and fruits—contrasting with the green deserts of monotonous invasive grasses that are almost sterile in terms of the possibilities they offer to the local fauna, other than covering the soil. They are, of course, not a single species, but in the hybrid post-colonial landscapes of Brazil, especially urban areas, there is a collection of forage grasses that arrived centuries ago from Africa with cattle and people. There are tense negotiations taking place constantly with them, in order to make coexistence possible (figure 4). Their strong roots suffocate other plants as they grow exceptionally fast on rainy spring and summer days.

Both the invasive grasses and the *cerrado* plants are considered 'weeds' and the Portuguese language has a complex vernacular classifier to describe them: *mato*. It is a polysemic word, a hybrid term for landscapes, vegetation, and plants. The expression '*meio do mato*' is used for saying something or someone is located in the middle of a sparsely occupied area covered by vegetation—similar to 'the bush' in Australian English. In comparison to the denser *mata*, *mato* can also mean a smaller woodland, bush or scrubland. It is also used for specific plants as well as a generalist derogatory term, when a plant or a group of plants are considered useless or ugly—similar

to ‘weed’ or ‘overgrowth’. Its feminine counterpart, *mata*, meaning forest or dense jungle, is the object of environmental protection and municipal, state and federal laws; even though frequently disrespected, the low-lying weedy *mato* is left to its own fate.

This is important in order to understand common reactions towards the project and the specific plants and vegetation planted there among neighbors, passers-by, and public parks staff. Since its creation, we have heard different people referring to it as a chaotic plethora of weeds, sometimes complaining and using the common expressions: ‘*isso é mato*’ (‘this is just weeds’), or ‘*esse monte de mato*’ (‘this bunch of weeds’). Those are expressions of disgust used when looking at overgrowth in an abandoned lot, for example, complaining about the lack of mowing by the city government and parks staff.

Weeds or *mato* are, of course, relational terms, never pure: one plant can be a weed in one time or space, but not in others; ‘the definition *is* the weed’s cultural story’ (Mabey 2010: 13—italics in the original). Plants are only weeds when they disturb neat ideas of a bounded, tamed garden, or a certain ‘wildness’ invades these neat spaces. Daniel has a motto summarizing his whole project: he wishes to plant *mato* in people’s minds—not just in the path itself. When visitors realize what the messy overgrowth is, that these plants have names and memories and tell stories, the *mato* can turn into a *cerrado* in their sensibilities and engagements with the landscape.



Figure 4. Photograph by the author, 2017.

Thus, caring for this path involves negotiating with other people, especially public parks staff, so they don’t mow *cerrado* plants mistaking them for common grass in a lawn. That can be hard when people have not been used to distinguishing one set of grasses from another. Memories and forgotten stories are then reactivated among visitors and these public workers, recollecting how their families used them as edible plants, in natural remedies, cough syrups, teas, and jams, and in several types of domestic instruments, from brooms to emery papers or boards, as well as stuffing

for scarecrows and dolls. These uses have long been forgotten by most urban dwellers, or have never been learned—but not by the oldest of neighbors, who still recall them when interacting with some of these plants. In a world affected by plastic waste, food shortage, and dependency on capitalist food chains, these plants and their stories and memories might have a few stories to tell us.<sup>4</sup>

### **Memory and Landscape: counter-mapping and counter-gardening**

Is the *Cerrado Infinito* a garden? What is a garden? Caballero does not like the word and its resonances to a sort of tamed, cultivated, aesthetically pleasing nature. Natasha Myers critiques some of the common histories behind the concept, as a space for seclusion and disinterested appreciation: '(...) the gardens I grapple with here do no such thing. These gardens don't seclude; rather, they throw us into the world, induce anxiety, and get us very interested in the urgency of life and death at the cusp of collapse on a damaged planet' (Myers 2019: 127).

In the city, the complex biome of the *Cerrado* is long gone, after centuries of coffee, sugarcane, cattle production and the sprawl of this massive megacity, and probably will remain so in the next few decades in the rest of Brazil outside ecological reservations, indigenous lands and maroon territories. The haunting aspects of its plants do not offer a fixed, bounded dimension, such as those related to the biogeographical concepts of biome or ecosystem. Spontaneous nature in the city offers 'unfixed' imaginative aesthetics and materiality; these marginal urban landscapes are fleeting, heterogeneous (Gandy 2013: 1309). In conversations with me, Caballero has stated several times how he despises some portrayals of his work as a 'savior' of the biome: how can we save a whole ecoregion inside a metropolis?

What the *Cerrado Infinito* path does is to offer counternarratives and a countermapping to the city (Myers 2019: 126), complexifying official classifications and erasures. It imagines an alternative history of São Paulo as a mosaic of tropical rainforests existing side by side with the savannah, as an inhabited landscape, as its weedy pyrophilic (fire-loving) plants thrive in disturbed lands affected since immemorial times by anthropogenic fire of indigenous populations and later European settlers—all of this is corroborated by historical travel reports. Rather than making us imagine any kind of 'pristine' past, the *cerrado* plants are inhabitants of messy *naturalcultural* landscapes. As Caballero reminds the visitors to his path, the city itself had *campos* (open fields) in its first settler name, given by the Jesuits in the sixteenth century. Multiple ecologies tell multiple stories and histories.

If every patch of urban *cerrado* in São Paulo is a residual ghost, Caballero's project could be read as a living cenotaph, as the *Cerrado* is dangerously disappearing in most of Brazil, both materially and imaginatively, at the same time as Amazon rainforest is turning into a degraded savannah. Following Edward Said's commentary on Simon Schama, memories and the relationship between memory and landscapes are contested, produced by a complex, tense, and ever-changing relation between selecting and forgetting (Said 2000). For every celebrated woodland, grove, and

4 In many different cities, rewilding lawns, gardens, and parks has been gathering people's attention. For a story closer to some of my readers, journalist Phoebe Weston has reported how British grassroots movements and city councils—including Plymouth—are changing their approach to lawn mowing, and letting wild flowers and meadows plants grow back (Weston 2021).

garden there are many forgotten, hidden and trampled-over patches of dunes, meadows, savannahs: disturbed mosaics of human and more-than-human elements.

Although a focus on native species can feel nativist, a re-imagination of pristine original landscapes, on a closer look there is an important point to be made on the imaginaries of landscapes. As almost all conservation efforts in the city focus on forest conservation, looking at the marginal *cerrado* plants in disturbed landscapes and urban wastelands complicates the dichotomy between native versus invasive, when 'native' in official discourses and projects refers only to one kind of plant: trees. The *matos* of urban Brazil remind us of these complicated pasts and haunted presents and futures.

## Conclusion

After so many years visiting the *cerrado* path, these weeds and bushes have affected my attentiveness, creating a type of ruderal curiosity, as Caballero and Stoetzer discuss. It is hard to keep walking around the city without looking at every crack, expecting the unexpected, wondering how many different plants one might spot, how many are growing side by side with the multitude of plants from every corner of the world. Weeds have complicated stories, thriving in sites of disturbance, following the threads of globalization, imperialism, and urbanization. But they can offer different ways for us to engage with the multiple ecologies in our cities.

## References

- Bailão, A. S. (2021) 'The Brazilian Campos in Nineteenth-Century Landscape Art', *Environmental & Society Portal, Arcadia*, 15 (Spring): 1–8. Available at: <https://doi.org/10.5282/rcc/9279> (Accessed 19 Jan 2022).
- Bardgett, R. et al. (2021) 'Combatting global grassland degradation', *Nature Reviews Earth & Environment*, 2: 720–735. Available at: <https://doi.org/10.1038/s43017-021-00207-2> (Accessed: 19 Jan 2022).
- Barron, Patrick (2014) 'Introduction: At the Edge of the Pale' in Mariani, M. and Barron, P. (eds.), *Terrain Vague: Interstices at the Edge of the Pale*. New York: Routledge: 24–30.
- Caballero, Daniel (2016) *Guia de Campo dos Campos de Piratininga, ou, O que sobrou do Cerrado paulistano, ou, Como fazer seu próprio Cerrado Infinito* [Field guide to the Campos de Piratininga, or, What is left of the Cerrado in São Paulo, or, How to create your own Infinite Cerrado]. São Paulo: La luz del fuego.
- Caballero, Daniel (no date), *Cerrado Infinito* website, <https://www.cerradoinfinito.com.br/> (Accessed: 19 Jan 2022).
- Carse, Ashley (2019) 'Dirty Landscapes: How Weediness Indexes State Disinvestment and Global Disconnection' in Hetherington, K. (ed.), *Infrastructure, Environment, and Life in the Anthropocene*. Durham: Duke University Press: 97–114.
- Enderson, Tim (2008) 'Walking through Ruins', in Ingold, T. and Vergunst, J. L. (eds.), *Ways of Walking: Ethnography and Practice on Foot*. Aldershot: Ashgate: 123–42.
- Gan, Elaine; Tsing, Anna; Swanson, Heather and Bubandt, Nils (2017) 'Introduction: Haunted

- Landscapes of the Anthropocene' in Tsing, A.; Swanson, H.; Gan, E. and Bubandt, N. (eds.), *Arts of Living on a Damaged Planet: Ghosts and Monsters of the Anthropocene*. Minneapolis: University of Minnesota Press: 1–14.
- Gandy, M. (2013) 'Marginalia: Aesthetics, Ecology, and Urban Wastelands', *Annals of the Association of American Geographers*, 103(6): 1301–16. Available at: <http://dx.doi.org/10.1080/00045608.2013.832105> (Accessed: 19 Jan 2022).
- Ingold, Tim (2011) 'Landscape or weather-world?', *Being Alive. Essays on movement, knowledge and description*. London: Routledge: 126–35.
- Lachmund, Jens (2003) 'Exploring the city of rubble. Botanical Fieldwork in Bombed Cities in Germany after World War II', *Osiris*, 18: 234–54. Available at: <http://dx.doi.org/10.1086/649386> (Accessed: 19 Jan 2022).
- Locatelli, Piero (2017) 'The revolution will not be televised: how a Guarani tribe got São Paulo's attention', *The Guardian*, 28 Nov 2017. Guardian São Paulo week. Available at: <https://theguardian.com/cities/2017/nov/28/guarani-indians-sao-paulo-protest> (Accessed: 18 Jan 2022).
- Lydia, Laura (2015) *Ervas sp / Ocupação Minhocão*. Digital video, col., 13m21s. Editing: KZL Filmes. Available at: [https://youtu.be/NHFjNIXIQ\\_Y](https://youtu.be/NHFjNIXIQ_Y) (Accessed: 31 Oct 2021).
- Mabey, Richard (1973) *The unofficial countryside*. London: Collins.
- Mabey, Richard (2010) *Weeds. In defense of Nature's most unloved plants*. London: HarperCollins.
- Machini, Mariana L. F. (2018) *Nas fissuras do concreto: Política e movimento nas hortas comunitárias da cidade de São Paulo*. Master's thesis, Graduate Program in Social Anthropology, University of São Paulo.
- Marengo, José A.; Ambrizzi, Tercio; Alves, Lincoln M.; Barreto, Naurinete J. C.; Reboita, Michelle Simões; and Ramos, Andrea M. (2020) 'Changing Trends in Rainfall Extremes in the Metropolitan Area of São Paulo: Causes and Impacts', *Frontiers in Climate*, 2 (3): online. Available at: <https://doi.org/10.3389/fclim.2020.00003> (Accessed: 01 Mar 2021).
- Myers, Natasha (2017) 'Becoming Sensor in Sentient Worlds: A More-than-natural History of a Black Oak Savannah' in Bakke, G. and Peterson, M. (eds.), *Between Matter and Method. Encounters in Anthropology and Art*. London: Bloomsbury: 73–96.
- Myers, Natasha (2019) 'From Edenic Apocalypse to Gardens against Eden' in Hetherington, K. (ed.), *Infrastructure, Environment, and Life in the Anthropocene*. Durham: Duke University Press: 115–48.
- Nobre, C. A., Marengo, J. A., and Seluchi, M. E. (2016) 'Some characteristics and impacts of the drought and water crisis in Southeastern Brazil during 2014 and 2015', *Journal of Water Resource and Protection*, 8: 252–62. Available at: <http://dx.doi.org/10.4236/jwarp.2016.82022> (Accessed: 19 Jan 2022).
- Pimenta, R. J. G.; Brandão Dias, P. F. P.; Leal, H. G.; Carmo A. O. d.; Oliveira-Mendes, B. B. R. d.; Chávez-Olórtegui, C. et al. (2019) 'Selected to survive and kill: *Tityus serrulatus*, the Brazilian yellow scorpion', *PLoS ONE*, 14 (4): online. Available at: <http://dx.doi.org/10.1371/journal.pone.0214075> (Accessed: 19 Jan 2022).
- Reynolds, Richard (2008) *On Guerrilla Gardening. A Handbook for gardening without boundaries*. London: Bloomsbury.
- Said, Edward (2000) 'Invention, Memory, and Place', *Critical Inquiry*, 26 (2): 175–192. Available at:

<http://dx.doi.org/10.1086/448963> (Accessed: 19 Jan 2022).

- Solà-Morales, Ignasi de (2014) 'Terrain vague', in Mariani, M. and Barron, P. (eds.) *Terrain Vague: interstices at the edge of the pale*. New York: Routledge: 24–30.
- Stoetzer, Bettina (2018) 'Ruderal ecologies: Rethinking Nature, Migration, and the Urban Landscape in Berlin', *Cultural Anthropology*, 33 (2): online. Available at: <https://doi.org/10.14506/ca33.2.09> (Accessed: 19 Jan 2022).
- Sukopp, Herbert (2002) On the early history of urban ecology in Europe. *Preslia*, 74: 373–93.
- Tsing, Anna (2015) *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*. Princeton: Princeton University Press.
- Tsing, Anna; Swanson, Heather; Gan, Elaine; Bubandt, Nils (eds.) (2017) *Arts of Living on a Damaged Planet: Ghosts and Monsters of the Anthropocene*. Minneapolis: University of Minnesota Press.
- Weston, Phoebe (2021) 'Went to mow... but stopped: how UK cities embraced the meadows revolution', *The Guardian*, 10 Jul 2021. Available at: <https://theguardian.com/environment/2021/jul/10/went-to-mow-but-stopped-how-uk-cities-embraced-meadows-revolution-aoe> (Accessed: 19 Jan 2022).

## Biography

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Fig. 1: *Sirens* 2021. Kate Paxman. Film still

## **Sirens: Crossing Thresholds of Multi-Entity Ethics**

Kate Paxman

In early Autumn 2019 I invited a group of artists, academics, and researchers to swim with me into a series of sea caves at Livermead in the Torbay Marine Conservation Zone, South West UK. Arising from conversations around my field research activities, and with my description of swimming into intertidal marine caves acting as lure, my invitation was purposefully informal, speaking to the practicalities of safety and September sea swimming, and offering no other instruction or preparation. My intention was to facilitate our instinctive and spontaneous co-creation of a space of mutual respect and awareness, where we might speculatively approach notions of sensing differently.

Our performative field trip was part of my field work activities, which involve multiple and varied excursions to gather field data from these local littoral zone marine caves. There is an ethics in my choice of this location as it is possible for me to access this nearby place repeatedly to look, and look again, my frequent visits generating a study of long duration. Here in this familiar, urban location I am framing the urgency of recognising the damaging force of anthropogenic planetary transformations on the very local, and considering the planetary scale of the climate emergency in intimate and human scales. My writing for this paper weaves my field notes through the text, *in interludes of different font*, to open up a space for “situated” (Haraway, 1991, p. 24), “multi-directional and practice-based processes of knowledge production” (Asberg, Holmstedt and Radomska, 2019, p. 14). Multispecies feminist theorist Donna Haraway explained her term “situated knowledges” in a 1988 essay (Haraway, 1988), saying it was born of a specific situation: “in scientific and technological, late-industrial, militarized, racist, and male-dominant societies... in the belly of the monster, in the United States in the late 1980s” (Haraway, 1988, p. 581). Feminist discussions on

the situated character of knowledge continue to have far-reaching theoretical concerns that render it a lively notion for how to *think-with*, *live-with* and *be-with* (Haraway, 2016) other organisms and entities in our times of human-driven ecological devastation.

#### field notes | Extract I

*We share the journey to the coast, and park in the dead-end side road that hugs the cliff edge. We push and climb past Heras fencing with its 'No Entry' sign - a make-shift barrier to prevent unsafe beach access - and onto a short flight of concrete steps, part missing, eroded and crumbling. Halfway down the steps we stop and put down our things. We can see the traffic on the A3022 Torbay Road which curves around the Bay; we can see the shops and hotels lining the seafront opposite in the distance. But we are in-between, standing just above the tide and about to step on slippery, still wet marine algae. We pause, the evening is still warm, we slowly take in all that is different here, we breathe in and out with the eternal rhythms of the waves. We change out of shoes and clothes and into wetsuits, then we walk, leaving our things behind, silent and barefoot, the long journey across the gritty red sand and around to the large, horizontal breccia platforms, slimy and sharp at the same time. We walk as far as we can, then sit down at the edges of the breccia, dangling our feet above the sea, our hands in shallow puddles of sea water, pressing into the sharp barnacles. We pause again.*

Marine caves are distributed throughout the rocky coastlines of Europe, but they are a relatively scarce habitat. The UK's submerged and partially submerged sea caves are the most varied and extensive on the Atlantic coast of Europe with many examples of wave-eroded marine caves found in Torbay, from Mackerel Cove in the north, to Sharkham Point in the south (JNCC). In this Special Area of Conservation they occur in different rock types, and "at levels from above the high water mark of spring tides down to permanently flooded caves lying in the infralittoral zone" (ibid.). Sea caves are dynamic environments subject to constant change by the action of the sea (JNCC, 2004, p. 2) and now facing accelerated risk of complete destruction from increasingly frequent extreme weather events. Recently published research showed that average winter wave heights along the Atlantic coasts of Western Europe have been rising for seven decades and wave heights during extreme weather conditions have increased by an average of 1.7 metres during the past 70 years. Increased wave heights cause more energetic storm events, and this is the main factor affecting coastal cliff erosion (Castelle *et al.*, 2018). Subject to increasingly frequent wave surges, the processes through which the caves were formed are also the mechanisms through which they will be more rapidly destroyed (JNCC, 2004, p. 3). In amongst the rocky shores of Torbay's Marine Conservation Zone, climate breakdown can be read in the action of the waves, and the rapid changes to the land's edges.

#### field notes | Extract II

*It is early evening. The four of us slip into the rough water at high tide and swim together into the first chamber. The waves are too wild; we can't enter any of the others, but swim to all their entrances before turning back. When we climb from the sea, the full moon is rising, huge, red. The Harvest Moon.*

During our crossing we swim closely together, bounded by practice as ritual-making – new rites for troubling troubled times. In the moments after clambering from the water and onto the rocks,



Fig. 2: *Sirens* 2021. Kate Paxman. Film still

we elatedly acknowledge the collective performance of our journey and how we connected in an unspoken common objective. Swimming together we had a shared intention, loosely formed and freely entered into, as our instants of pause – when we first reached the beach and again before we entered the water – were modes of grounding ourselves and joining this collaborative space. Our swim became ritualization, something described by scholar Catherine Bell which “[i]n a very preliminary sense ... is a way of acting that is designed and orchestrated to distinguish and privilege what is being done in comparison to other, usually more quotidian, activities” (Bell, 2009, p. 74). When we slipped into the sea and swam together, our “strategic and practical orientation for acting” (Bell, 2009, p. 85) moved us beyond individual concerns of immediate experience. We were immersed, suspended and kicking, free of our own weight, tasting salt, our heads above the surface, our hands and feet, our bodies, arms and legs below, accepting responsibility for each other, and committing to our aim of swimming into the caves.

Our quietly performed rite was a tactic of attunement within this marine habitat, and of noticing our implication and entanglements. In our era when climate disaster is leading to rapid and often violent ecological changes I believe it is imperative that we learn to engage with the multitudes of sensoria that are more than human to “learn[...] again, or for the first time, how to become less deadly, more response-able, more attuned” (Haraway, 2016, p. 98). In interdisciplinary artist-theorist Elaine Gan’s important work *Time Machines: Making and Unmaking Rice* (Gan, 2016) Gan states that attuning is a “mode of coordination in which the rhythms of two or more entities are open and responsive to each other” (Gan, 2016, p. 143). Attunement takes time to develop and progress across difference, but as Gan says, it is a means of supporting the persistence and proliferation of different entities, without hierarchies, and with the possibility of change and positive effects (ibid.). The emergence of these rites in my research methods comes directly from my aim to re-think how we can better inhabit our shared world when our futures look increasingly hostile.



Fig. 3: *Sirens* 2021. Kate Paxman. Film still

*Sirens* is a cluster of works made with field recordings and field notes from this performative field trip into the caves and includes a moving image installation, sound composition, and performance-lecture. *Sirens* considers the future possibilities for the multispecies ecologies<sup>1</sup> of Torbay's shore area, and I will speak about my research for this work in this paper.

#### field notes | Extract III

*we are in a choppy sea, at high tide, way out deep and looking back to land. The cliffs glow, russet-coloured, and treading water, I describe how this Permian Red Breccia is made from desert sands and carries in its strata the evidence of massive and violent flash-flooding, and how, approximately 252 million years ago, its era ended in the largest mass extinction event that Phanaerozoic Earth has witnessed.*

In our era of habitat degradation and loss we are crossing multiple ecological thresholds and witnessing the advent of cascading climate change (Collins *et al.*, 2019). We urgently need to think again how we apprehend the places we inhabit and have long exploited through our dependence on an extractive and racial capitalism. My methods and research for *Sirens* commit to an acknowledgement of an "ecology of the senses", how non-humans and humans sense the environment, what it is possible to sense and why we sense the world. My use of the pronoun "we" here is problematic as highlighted by Elaine Gan, speaking at the 2019 Neuhaus Symposium at Het Nieuwe Instituut, Rotterdam (Gan, 2019), who remarks on the importance of considering who or what we mean when we say "we". Gan's comment reflects on who we are counting, who gets to profit and who is expendable, who are the disenfranchised and the dispossessed, and who and what are "we" that is not only human. The natural disasters of climate catastrophe are already exposing

<sup>1</sup> Here I am referencing the practice of multispecies ethnography – a more-than-human approach to ethnographic research and writing, and multispecies investigations of social and cultural phenomena (Münster, U. and Locke, P. (2015) Multispecies Ethnography: Entry for Oxford University Bibliographies Online.)

the inequalities and the “slow violence”<sup>2</sup> of deathly late-capitalist, and colonial and imperial practices across the planet, which devastate ecologies and their entangled and dependent communities of humans and more than humans. Gan’s work demonstrates how vital it is to “decentre” the human from constructs of “age-old humanist methods” in knowledge practices and thinking, and to ask what it might mean to imagine how to be human differently (Gan, 2016, p. 139).

Professor of Inhuman Geography Kathryn Yusoff calls for the need for an ethics of the insensible which she terms as “the force or motivation oscillating between the material and virtual, inhuman and human, organic and nonorganic, time and the untimely” (Yusoff, 2013, p. 213). Yusoff writes that in order to create this “we need to understand something of how sense is enrolled into our habits of thought and theories of materiality” (ibid.). These habits and theories have arisen through a Western-coded way of thinking the world, and I argue that challenging the human-centrism that defines this world view is crucial if we are to create what Yusoff calls “new practices of sensations and new sensibilities around such diffuse, recalcitrant and dislocated issues as biodiversity loss... and climate change” (Yusoff, 2013, p. 2).

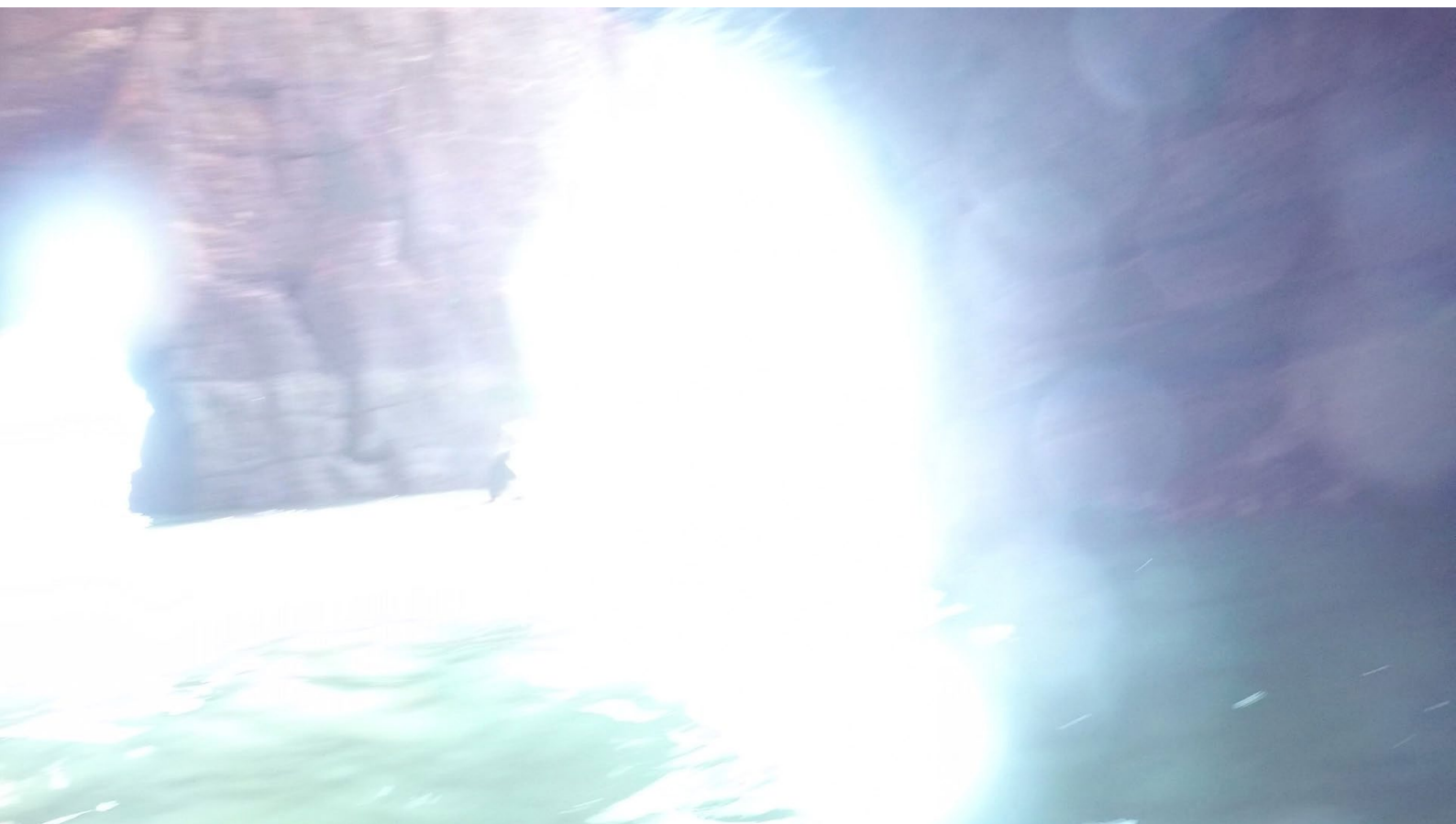


Fig. 4: *Sirens* 2021. Kate Paxman. Film still

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2 These are the gradual, more invisible effects of climate change, toxic drift, deforestation, oil spills, and the environmental aftermath of war that Rob Nixon calls “a long emergency of slow violence” afflicting poorer communities and highlighting social hierarchies of race, class, and citizenship (Nixon, 2011, p.3).

Threading through my research and artworks for *Sirens* is my intention to ask what kind of thinking might usefully guide our swim at this particular time and in this particular place<sup>3</sup> (Asberg, Holmstedt and Radomska, 2019, p. 18). We live in an era where we face uncertain and inhospitable futures, and in order to think through the habits that define our current crisis, I believe that we must shift our tolerance of notions of human exceptionalism, approach our response-ability (Haraway, 2016) and reimagine our role as humans (Gan, 2019) in relation to other species and entities. Haraway's term (response-ability), central within many of her writings, suggests what feminist post-humanist Cecilia Asberg refers to as "a cultivated ethical sensitivity and process of responding through entangled encounters between species" and marks a shift towards an inclusive, democratic and responsive process of being and thinking (Asberg, Holmstedt and Radomska, 2019, p. 141). This re-imagining poses a vital challenge to the anthropocentrism that has dominated human-situated ways of thinking the world by acknowledging the interconnectedness and inseparability of humans and other life forms and entities that we depend upon for human survival (Dominique and Taylor, 2013).



Fig. 5: *Sirens* 2021. Kate Paxman. Film still

I intend our watery trip to be a journey towards thinking with care (Puig de la Bellacasa, 2017) through an attunement with this local inshore marine habitat and our swim into the caves. This speculative approach to thinking differently draws on feminist theories of women's and other marginalized people's everyday experiences, which argue that care is critical to social organisation and the valuing of the "other" (Gilligan, 2011). In her writing on "Matters of Care", María Puig de la Bellacasa notes, "In feminist discussions as well as in activism, the politics of caring remain at the heart of concerns

<sup>3</sup> In their co-edited essay, Asberg, Holmstedt and Radomska write of kelp as material entities immersed in a multitude of relations with other creatures and inorganic elements of the littoral zone. They propose "thinking with kelp" as a multi-faceted methodology of transversal and transdisciplinary knowledge production and practices committed to an ethics of multispecies response-ability (Haraway 2008).

with exclusions and critiques of power dynamics in stratified worlds.” (Puig de la Bellacasa, 2017, p. 29). Thinking with care is a vital necessity for thinking collectively in interdependent worlds (Puig de la Bellacasa, 2017) in a way that extends caring notions beyond humans to notice what Puig de la Bellacasa calls “the living web of care” practised by “a collective disseminated force” of nonhuman agencies and communities (Puig de la Bellacasa, 2017, p. 24). Through Puig de la Bellacasa’s explorations of practices of care and her rereading of Haraway’s notions of feminist discussions on situated knowledge and *thinking-with*, I find a means to sense/make sense of/understand that worlds seen through care accentuate interdependency and involvement; that “relations of thinking and knowing require care” (Puig de la Bellacasa, 2012). Slipping into the sea together prompted us to make space for re-imagining what it means to be human in our entangled ecologies, in order to begin to find ways to participate in the building of more liveable multispecies worlds.

#### field notes | Extract IV

*as we cross the threshold and swim into the first chamber, we disturb a large colony of feral pigeons: rock doves returned to the ancient breccia cliffs from railway arches and municipal buildings, whose sharp wing-clap and flutter breaks the soft, repetitive noise of their purred voices. We spin round and round in the water gazing upwards to the high roof. The air is filled with floating, downy feathers.*

At the threshold, or place of entering a marine cave, conditions change. Cave biologists define the limit of the threshold zone as the region where illumination from the cave entrance is enough to support the growth of vascular plants – an indication of habitat that supports photosynthesis, vital to most plant life (Moseley, 2009). Conditions particular to cave threshold environments provide a niche for assemblages of organisms where they will be “protected from high solar radiation and the extremes of drought and atmospheric changes in temperature” (Moseley, 2009, p. 53).

Fig. 6: *Sirens* 2021. Kate Paxman. Film still



In conversation, geologist and author of the Torbay Caves Survey<sup>4</sup> Dr Chris Procter explained to me that ecological transitions exhibited within marine caves are substantially more varied and complex than those typical of inland caves. In addition to the usual threshold, deep threshold and dark zones resulting from abiotic light, temperature and humidity gradients, a variety of littoral, supralittoral and/or nearshore habitats and zones can be present. Other physical conditions such as wave surge can change rapidly from the entrance to the deeper part of a cave, and this often results in a pattern of biological zonation that can contain communities that are terrestrial and aquatic; maritime and non-marine fauna living in close proximity (Procter, 2019). A sea cave threshold is an environment where inhabitants find comfort and refuge, an ecological niche within narrow margins and especially vulnerable to increasing dynamics of systems change.

### *Crossing the Threshold of the Sea Cave*

In preparation for this research trip to Livermead's marine caves I had conversations with open-water swimmer Sophie Pierce. Sophie describes entering the chamber:

*at the first cave you're entering under an arch, and you get an incredible light effect, it's quite a well-known phenomenon that divers talk about. They look as though they're lit: the caves look as though they're lit from underneath, so you've got this amazing glow of light just under the water where the cave walls are. And you swim in and you're in a cavernous space with the water gurgling and running up and down the sort of inner caves, and it can be a kind of groaning noise. The water is constantly churning through, and you're moving and being moved by the water (Pierce, 2018).*

We hesitated at the mouth of the cave, the rough waves and the thick rock walls of the arch making us nervous and heightening our awareness of the moment and each other. We swam in one by one and re-gathered in the huge chamber. Inside, the water was no longer crashing, but rocking us together and apart. Filled with a sudden rush of euphoria, we encountered threshold sentience through strange messages travelling to our senses as we were buoyed by the sea. Swimming into this unfamiliar environment stimulated a multitude of sense-memories where the strangeness of the atmosphere had a profound influence on consciousness and understanding of space, sensation, materiality and otherness. Being human in water, moving in a different medium, flipped our habitual modes of sensing, where sensing is a means of understanding, and our whole bodies brimmed with sensations of touch as the water ran around us and over us.

In her exploration of care for a speculative ethics María Puig de la Bellacasa speaks of understanding through caring, thinking and knowing as touch, and of touch as a sensorial metaphor which exposes the uncertainties around the materiality of thinking and its consequences (Puig de la Bellacasa, 2017). Bellacasa comments that thinking care "through touch and as sensory values" (Puig de la Bellacasa, 2017, p. 122) as an intra-active and non-bilateral reciprocity raises the question of what it means to think "in the web of care" (ibid.), and says that her exploration of touch attempts to be an exercise in "carefulness about the speculative potentialities of haptic visions" (Puig de la Bellacasa, 2012). Speculatively including thoughts of reciprocity still calls from what Bellacasa names "the

4 Procter, C. (1985-87) 'Habitat point records from 1985-87 Procter Torbay caves survey'. Available at: <https://data.gov.uk/dataset/aaee8375-7bd7-42f6-90c9-1a83cf6904ac/habitat-point-records-from-1985-87-procter-torbay-caves-survey> (Accessed: 23 November 2021).

uneasy inheritances of human antiecolological inheritances” (ibid.), and this brings me to sensing/ understanding as responsibility through attunement (Gan, 2016; Haraway, 1988). In my practice as research, and as an artist, I use tactics of attunement as ways of attempting to alter understandings of the places we occupy, inhabit and exploit in an everyday way. Disrupting narrative habits through strangeness brings a sensorial estrangement and re-sensitisation and a readiness to be changed by the attempted encounter with the sensoria of others. “We” are at a threshold collectively, planetarily; we are in a state of violent change. In Torbay’s Marine Conservation Zone, I can clearly apprehend the pressures of practices which have become normalised. Yet working to the rhythms of the tide in this porous, breathing, diverse habitat, in the undersides, the openings beneath dense urban occupation, I think with and think what can be unlearned by imaginatively engaging with the environment of cave threshold, in the now.

## References

- Asberg, C., Holmstedt, J. and Radomska, M. (2019) ‘Methodologies of Kelp: On Feminist Posthumanities, Transversal Knowledge Production and Multispecies Ethics in an Age of Entanglement’, in Methi, H., Cahoon, N. and Wolfsberger, A. (eds.) *The Kelp Congress*. Svolvær: NNKS Press, pp. 11-23.
- Bell, C. (2009) *Ritual Theory, Ritual Practice*. Oxford: Oxford University Press.
- Castelle, B., Dodet, G., Masselink, G. and Scott, T. (2018) ‘Increased winter-mean wave height, variability and periodicity in the northeast Atlantic over 1949–2017’, *Geophysical Research Letters*, 45(8), pp. 3586–3596.
- Collins M., M., Sutherland, L., Bouwer, S.-M., Cheong, T., Frölicher, H., Jacot Des Combes, M., Koll Roxy, I., Losada, K., McInnes, B., Ratter, E., Rivera-Arriaga, R. D., Susanto, D., Swingedouw and Tibig, L. (2019) *Extremes, Abrupt Changes and Managing Risk*, In press 6.8). Available at: <https://www.ipcc.ch/srocc/chapter/chapter-6/> (Accessed: 16 December 2021).
- Dominique, L. and Taylor, H. (2013) ‘Shared life: An introduction’, *Social Science Information*, 52(2), pp. 183–186.
- Gan, E. (2016) *Time Machines: Making and Unmaking Rice*. Doctor of Philosophy, University of California Santa Cruz, California [Online] Available at: <http://www.escholarship.org/uc/item/1pp8r3gk> (Accessed: 24 November 2021).
- Gan, E. (2019) *Against Progress and Apocalypse: Diagrams for Nature Cultures*. Neuhaus Symposium Het Nieuwe Instituut. Available at: <https://vimeo.com/339308413>.
- Gilligan, C. (2011) ‘Ethics of care’, *Entrevista concedida a Webteam em*, 21.
- Haraway, D. (1988) ‘Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective’, *Feminist Studies*, Vol. 14, No. 3, pp. 575-599
- Haraway, D. (1991) *Simians, Cyborgs, and Women: The Reinvention of Nature*. New York: Routledge.

- Haraway, D. (2008) *When the Species Meet*. Minneapolis: University of Minnesota Press
- Haraway, D. (2016) *Staying With the Trouble: Making Kin in the Chthulucene*. Durham and London: Duke University Press.
- JNCC Sea caves (submerged or partially submerged). Available at: <https://sac.jncc.gov.uk/habitat/H8330/> (Accessed: 21 November 2021).
- JNCC, J. N. C. C. (2004) *Common Standards Monitoring guidance for Sea Caves*, Version August 2004. Peterborough, UK: JNCC. Available at: <http://jncc.defra.gov.uk/page-2236> (Accessed: 21 November 2021).
- Moseley, M. (2009) 'Are all caves ecotones?', *Cave and Karst Science*, 36(2), pp. 53 to 58.
- Münster, U. and Locke, P. (2015) *Multispecies Ethnography: Entry for Oxford University Bibliographies Online*.
- Pierce, S. 2018. cave swimming. In: Paxman, K. (ed.).
- Procter, C. (1985-87) 'Habitat point records from 1985-87 Procter Torbay caves survey'. Available at: <https://data.gov.uk/dataset/aaee8375-7bd7-42f6-90c9-1a83cf6904ac/habitat-point-records-from-1985-87-procter-torbay-caves-survey> (Accessed: 23 November 2021).
- Procter, C. 2019. The Marine Caves of Torbay's Littoral Zone. In: Paxman, K. (ed.).
- Puig de la Bellacasa, M. (2012) 'Nothing comes without its world': thinking with care', *The Sociological Review*, 60, pp. 197-216.
- Puig de la Bellacasa, M. (2017) *Matters of Care: Speculative Ethics in More Than Human Worlds*. Minneapolis, London: University of Minnesota Press.
- Yusoff, K. (2013) 'Insensible Worlds: Postrelational Ethics, Indeterminacy and the (k)Notes of Relating', *Environment and Planning D: Society and Space*, 31(2), pp. 208-226.

## Biography

Kate Paxman is an artist, educator and practice-led PhD researcher in Media Arts with the School of Art, Design and Architecture at Plymouth University. Kate works with film and sound, paying close attention to geologies, entities and systems and building speculative narratives which explore our era of unavoidable climate catastrophe. Her work has received a number of commissions and awards, most recently from Aeolus Online, BEAST FEaST 2021 and Arts Council England, and her published work includes writing for 'The Ecological Citizen', a peer-reviewed ecocentric journal and THEOREM 2018, Cambridge, UK, Ruskin Arts.

In this presentation, Kate discusses her research for her film and sound installation *Sirens* (2021). Kate's research is focused on sea caves in the shore area of Torbay's Marine Conservation Zone where she implements a proactive methodology of research through observation, inspired by the field work activities of natural history, but expanded to include other ways of measuring such as through intuition and imagination, and using conjuring, augury and ritual. In her work for *Sirens* these techniques allow Kate to engage in an acknowledgement of an ecology of the senses and how non-humans and humans sense the environment, as she attempts to decentre patterns of exceptionalist thinking and apprehend the diverse sensibilities of others.

# Musicking with Tapyra'yawara: Ecomusicologies from the Amazon Rainforest

Karine Aguiar de Sousa Saunier

with the collaboration of Mestre Daio, Mestre Ercílio and Cleumir Leda

## 1. Introduction

The *Tapyra'yawara*<sup>1</sup> is an enchanted being, described since immemorial times in the cosmologies of native peoples of Panamazonia. The name comes from the sum of two words in Tupi: the prefix “tapir,” which has the equivalent meaning of tapir, and “-iauara,” the equivalent of the jaguar. It is portrayed as a kind of “water jaguar” or amphibious jaguar that lives close to ponds, lakes, aningaís<sup>2</sup>, and streams. In the *Dicionário do Folclore Brasileiro* (CÂMARA CASCUDO, 2012), Câmara Cascudo presents the entry “Tapiraiauara,” with the variants “Tapiora,” “Tapioara” and “Tapira-oiara,” to describe a “fabulous animal for the shellfish gatherers of the Madeira River and tributaries of the Amazon.” In that work, he mentions that until the first decade of the 20th century:

Tapiora or Tapioara did not exist, but the “Tapyira-lauára, dog tapir, jaguar tapir” appears to hunters who violate hunting laws by killing pregnant females. They say that it is a jaguar with the head of a tapir; when the confident hunter, on seeing her carelessly letting him get close, thinks he can shoot her safely with an arrow, she gets up and shows what she is, charging, barely giving him time, in most cases, to flee without looking back ... It is an unfolding and expansion of the myth of a guardian of hunting and fishing, of the constant suppression of excessive hunting. (CÂMARA CASCUDO, 2012, p. 676)<sup>3</sup>

In *Cuentos y leyendas de America Latina* by Maria Acosta and Sérgio Álvarez (2006), we find mention of the term “tapira” in the Dessana tale *El rugido de Tapira*. This story reaffirms characteristics in the descriptions in Câmara Cascudo’s (2012) definition: an entity that protects forests against excess and greed in the use of natural resources. In the Dessana tale, *tapira* is seen as an entity that governs the jungle and protects the fruits, its primary food source.

Among the Sateré-Mawé people who inhabit the municipalities of Parintins, Barreirinha, and Maués, in the state of Amazonas, Tapyra'yawara (spirit of jaguars) is mentioned as one of the six spirits that protect Mother Earth (YAMÃ, 2019, p. 32). Considered a sacred entity, Tapyra'yawara is associated with ethical values that guide the relationship between human beings, non-humans, and the environment. Because it inhabits the limits of the forest, it is one of the entities (or spirits) responsible for its protection. According to the laws of Tupana, the Creator for the Sateré people, men, animals, and the environment must exist in a relationship of mutual care, and it is the role of forest entities and spirits such as Tapyra'yawara to “supervise” this relationship of respect.

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1 We decided to adopt the spelling used by the professor and researcher Yaguarê Yamã, a member of the Sateré-Mawé people, to contemplate the epistemologies of the native peoples from the municipality of Maués (YAMÃ, 2019).

2 A place similar to a swamp where there is a predominance of a native Amazonian plant called *anina*.

3 Não existia a Tapiora ou Tapioara mas a “Tapyira-lauára, anta-cachorro, anta-onça,” que aparece aos caçadores que violam as leis de caça matando as fêmeas grávidas. Contam que é uma onça com cabeça de anta, que quando o caçador confiante, porque a vê descuidada deixá-lo se aproximar, pensa podê-la flechar a salvo, se levanta e mostra o que é, investindo, mal dando-lhe tempo na mor parte dos casos, a fugir sem olhar para trás ... É um desdobramento e ampliação do mito, custódia de caça para pesca, sempre no plano da repressão dos excessos. (CÂMARA CASCUDO, 2012, p. 676)



**Figure 1.** Representation of Tapiraiauara conceived by the artist Adeilso Oliveira Souza, Master of Oral Traditions from the community of Santa Maria do Maués-açu

Guimarães Rosa, a Brazilian writer whose work is rich in references to fauna, includes in his book *Tutameia (Terceiras Estórias)*, published in 1967, a short story entitled “Tapiiraiauara,” in which “the nameless narrator tells how he managed to free a tapir and their offspring from being slaughtered by a hunter, Iô Isnar” (SILVA & ROLIM, 2016, p. 137). Rosa does not describe the “tapiiraiauara” as an enchanted or mythological being. He describes two animals (mother and cub) of the species *Tapirus terrestris*. The tapir is considered the largest mammal in South America; it is an animal with nocturnal (or twilight) habits, choosing the day’s hottest hours to rest. There are four species of tapir in the world, and all of them are listed on the Red List of Endangered Species of the International Union for the Conservation of Nature (IUCN).



**Figure 2.** The species *Tapirus terrestris* is predominant in Brazilian territory and dispersed throughout South America. Photo: Nicolas Ornellas. Available at: <https://eco21.eco.br/anta-a-jardineira-da-floresta/>

The female generates a single child per pregnancy (lasting between 13 and 14 months) and takes five months to become fertile again. Tapirs are considered excellent seed dispersers and play a fundamental role in forming and maintaining biodiversity. Because they move over great distances, they connect different habitat types and, therefore, contribute to understanding the interrelationships in the mosaic of habitats in the landscape. This ability makes them “ecological detectives” and a “sentinel species,” “capable of alerting to the risks present in the environment where other species of fauna, domestic animals, and rural communities live. Scientific research using biological samples of tapirs such as blood, tissue, among others, have identified dangerous substances that are present in the study regions, such as high levels of pesticides” (PICCIN, 2019).

In “O mito moderno da natureza intocada,” Antônio Carlos Diegues (2001) investigated the symbolic and imaginary relationships between man and nature from the perspective of traditional populations (indigenous, extractivist, quilombolas<sup>4</sup>, etc.) that inhabit protected areas. On page 85, he makes a mention of “tapiora:”

In this sense, it is essential to analyze the system of representations, symbols, and myths that these traditional populations build, as it is based on this that they act on the environment—and also based on these representations and the accumulated empirical knowledge that their traditional management systems develop, which will be analyzed later. The popular imagination of the peoples of the forest, rivers, and lakes in Brazil is full of magical beings that punish those who destroy the forests (caipora/curupira, Mãe da Mata, Boitatá); those who mistreat animals in the woods (Anhangá); those that kill animals in the breeding season (Tapiora); those who fish more than necessary (Mãe d’Água) (Câmara Cascudo, 1972). Thus, the inhabitants of the floodplain of Marituba (Alagoas) have several legends, such as the one about “Mãe d’Água,” which becomes the canoe of fishermen who are very ambitious and needlessly remove a lot of fish from the lake. (DIEGUES, 2001, p. 85)<sup>5</sup>

In the first decade of the 21st century, this ancient Amazonian mythical figure gave rise to the Dance of Tapiraiauara, a June revelry created in the community of Santa Maria do Maués-açu, located on the right bank of the Maués-açu River, approximately 60 km from the municipality’s headquarters. In his doctoral thesis, Cristian Pio Ávila (2016) briefly mentions this revelry, understanding it as

[...] a kind of dramatic dance, created in the community of Santa Maria do Maués-Açu, [which] represents the legend of a fantastic animal, half jaguar, half tapir, which attacks anglers who are used to predatory fishing. Next to the tapiraiauara (which moves with two “brains” inside it) dance young people characterized as ghosts and monkeys. (ÁVILA, 2016, p. 355)<sup>6</sup>

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4 Quilombolas are the descendants and remnants of communities formed by fugitive slaves (the quilombos), between the 16th century and the year 1888 (when slavery was abolished), in Brazil. Currently, quilombola communities are present throughout the Brazilian territory, and in them there is a rich culture, based on black, indigenous and white ancestry. See: <https://brasilecola.uol.com.br/sociologia/quilombolas.htm>.

5 Nesse sentido, é importante analisar o sistema de representações, símbolos e mitos que essas populações tradicionais constroem, pois é com base nele que agem sobre o meio. E com base também nessas representações e no conhecimento empírico acumulado que desenvolvem seus sistemas tradicionais de manejo, que serão analisados mais adiante. O imaginário popular dos povos da floresta, rios e lagos brasileiros está repleto de entes mágicos que castigam os que destroem as florestas (caipora/curupira, Mãe da Mata, Boitatá); os que maltratam os animais da mata (Anhangá); os que matam os animais em época de reprodução (Tapiora); os que pescam mais que o necessário (Mãe d’Água) (Câmara Cascudo, 1972). Assim, os moradores da várzea da Marituba (Alagoas) têm várias lendas, como a da “Mãe d’Água”, que vira a canoa dos pescadores que são muito ambiciosos e retiram desnecessariamente muito peixe da lagoa. (DIEGUES, 2001, p. 85)

6 [...] uma espécie de dança dramática, criada na comunidade de Santa Maria do Maués-Açu, que representa a lenda de um animal fantástico, meio onça, meio anta, que ataca os pescadores que tem por hábito a pesca predatória. Junto da tapiraiauara (que se movimenta com dois “miolos” dentro dela) dançam jovens caracterizados como visagens (fantasmas) e macacos. (ÁVILA, 2016, p. 355)

As reported by Adeilson Oliveira Souza (2018) or “Mestre Daio” – the prominent leader of this cultural manifestation in the community of Santa Maria – before the creation of this dance, a game was already being played there with the figure of Tapiraiauara, in a different format to the one in use today. He says that a match involving Tapyra’yawara was started by two former residents of the community, Adilson, and Antônio Rodrigues Livramento. In the beginnings of this festivity, there was no community involvement, no music or musicians, just two dancers who danced under a puppet that paraded through Santa Maria, mainly having the effect of frightening children. With the absence of community involvement, the tradition had almost disappeared. At this point, the young Mestre Daio asked permission from the creators of Tapyra’yawara to improve the practice and return to present it in a format that involved music, dance, floats, and other characters. So, he invited his friend Mestre Ercílio to compose the songs that would narrate the revelry. Mestre Daio also discovered that his father (Mestre Zequinha) had played the banjo in this context. Tapyra’yawara’s revelry was consolidated in this new format and has been presented in the community of Santa Maria do Maués-açu, in the surrounding communities, and at events in the municipality of Maués, for nearly two decades now.

## 2. The Ecomusicology of an Amazonian Dramatic Dance

Faced with the many intertwinings of this festivity with ecological issues, I chose to carry out an eco-critique of Mestre Daio’s music-making, relying on Ecomusicology as an “ecomusicology – the study of the intersections of music/sound, culture/society, and nature/environment” (ALLEN & DAWE, 2016, p. 1–2, our translation). By playing and singing together, these musicians not only have fun or support their cultures, but they learn from each other an affection for the environment in which they live, and its importance in sustaining their own lives.



**Figure 3.** Tapiraiauara Dance performance during the Saint John’s festivity in the community of Santa Maria do Maués-açu

In this sense, we evoke the notion of “musicking” coined by Christopher Small (1999), who was concerned with “the nature of the musical act and its function in human life” (SMALL, 1999, p. 9). He believes that

[...] the essence of music lies not in musical works but in taking part in the performance, in social action. Music is thus not so much a noun as a verb, ‘to music’. To music is to take part in any capacity in a musical performance, and the meaning of musicking lies in the relationships that are established between the participants by the performance. (SMALL, 1999, p. 9)

For this study, it was essential to revisit this notion coined at the end of the 20th century because

Musicking is part of that iconic, gestural process of giving and receiving information about relationships that unites the living world, and it is a ritual by means of which the participants not only learn about, but directly experience, their concepts of how they relate, and how they ought to relate, to other human beings and to the rest of the world. These ideal relationships are often extremely complex, too complex to be articulated in words, but they are articulated effortlessly by the musical performance, enabling the participants to explore, affirm and celebrate them. Musicking is thus as central in importance to our humanness as is taking part in speech acts, and all normally endowed human beings are born capable of taking part in it, not just of understanding the gestures but of making their own. (SMALL, 1999, p. 9)

Furthermore, to think about the perception and values that these musicians have built about the environment in which they live, I turn to reflections developed by Humanist Geography through the concept of topophilia (TUAN, 1974). This word comes from the Greek *topos*, meaning place, and *philia*, meaning positive feeling, and expresses the “affective link between the person and the place or physical environment” (TUAN, 1974, p. 5). The concept of topophilia elaborated by Yi-Fu Tuan “associates feeling with the place” (TUAN, 1974, p. 129) and is constructed based on personal experience. In the conception of this scholar, this is a vivid, concrete, and diffuse concept as it comprises all the affective ties of human beings with the material environment. The bonds of affectivity with the environment or place can vary “profoundly in intensity, subtlety, and mode of expression.” A person can aesthetically react to the environment (whether in the pleasure of sight or even the sensation of fleeting beauty) or in a tactile way through the “delight of feeling the air, water, earth,” etc. People also produce feelings about places they regard as their home or even their means of earning a living. In topophilia, the site or the environment are vehicles of emotional and robust events, which can also be perceived as symbols (TUAN, 1974, p. 107). The atmosphere is not always presented as a “direct cause of topophilia.” Still, it provides “sensory stimulus that, by acting as a perceived image, gives shape to our joys and ideals” (TUAN, 1974, p. 129). Topophilia is deeply related to the perceptions and values that people create about the environment in which they live, and these values and perceptions are made according to their experiences and worldviews.



**Figure 4.** Scenery produced by Tapyra'yawara participants with organic material found in the forest and the reuse of plastic bottles

The Tapiraiauaara Dance reproduces the physical and symbolic environment of the community of Santa Maria do Maués-açu. By using native plants (leaves of the Amazonian palm tree *jarazeiro*, very abundant in the community's igapó ecosystems) and a diversity of organic material found in the "forests" (native category used to name the forests that surround the community) of the community for the creation of scenarios, the players represent the physical characteristics of the location. The reproduction of the physical environment through the designs created for the dance also promotes knowledge about the local fauna and flora for residents and visitors, reinforcing the feeling of belonging to the place.

In making the scenarios that make up the presentations, the players also reuse plastic, metal, and fabric, among other materials, that might otherwise be discarded as garbage by the community. Although it may seem to be presented with a naive attitude on the part of the players, the reuse of waste draws attention to a severe problem in the community regarding the destination of the garbage produced there. Plastic waste has increased at a speed never seen before, as reported by locals and residents, invading the riverbanks and spreading across the entire length of the community. As it does not have a program for the disposal and reuse of the waste produced, the community's inhabitants have taken the initiative to build a sanitary landfill to dispose of the trash.

In the reproduction of the symbolic environment of Santa Maria do Maués-açu, there is a musical repertoire composed of nine songs written by Mestre Ercílio (the lead singer-songwriter in the Tapyra'yawara revelry) in which fantastic stories of the sight of the mythical animal are narrated, as well as its physical characteristics, its behavior and its role as a protective entity of lakes, rivers, springs and floodplain ecosystems in the Amazon. Mestre Ercílio builds the narrative that structures the musical repertoire from the testimonies and memories of the oldest inhabitants of the Santa Maria community and the surrounding communities, who said they had seen Tapiraiauaara at some point in their life. These sightings are usually narrated as experiences from the distant past, which were lived in ancient times. In the repertoire mentioned above, there is also a meticulous exercise in environmental awareness by Mestre Ercílio, who also works as a fisherman and, in his verses,

describes everything from fishing techniques to the functions of certain fruits and vegetables in catching fish. The following is one of Mestre Ercílio's songs that narrate fishing using the fruit of the jauari as bait.

The following transcript is by Cleumir Leda, a native musician and music educator from Maués who has kindly collaborated with this research project.

**DEBAIXO DO JARAZEIRO**

Compositor: Mestre Ercílio

$\text{♩} = 105$

Quan - dou vou pes-car é de-bai - xo do ja-ra-zei - ro eu - ma pa-lhei -

1. - ra que tem na bei-ra do rio na bei-ra do rio Eu vou o-lhan - do vou pas -

13 san-do por a-li Eu gos-toé de pes-ca - ar é com a fru-ta do jau-a-ri

19 2. fru-ta do jau - a - ri Lá a - di-an - te eu ve - joa vi - tó - ria-re - gia

25 é um cer-ra - do que tem lá no a-nin-gal vi-tó-ri-a - ré-gia e-la é de tra-di-

32 1. cão e-la é mui-to fa-mo - sa apa-re-ce na te-le-vi - são na te-le-vi - são

**Figure 5.** Transcript by Cleumir Leda, one of the native musicians and contributors to this research project

### Under the jarazeiro (Music and lyrics by Mestre Ercílio)

*When I go fishing  
it's under the jarazeiro  
it's a straw on the riverbank*

*I'm looking; I'm passing by  
I like to fish; it's with the jauari fruit  
There, in the middle of the water lily  
it's a savannah there in the aningal  
water lily, it is of tradition  
she is very famous appears on television*



**Figure 6.** *Astrocaryum jauari* e *Leopoldinia pulchra*. Palmeiras Jauari e Jará.  
Martius, C. F. P. von. *Historia Naturalis Palmarum*, v. 2, t. 52, 1839. Available: <http://olimpiareisresque.blogspot.com/2017/09/a-bonita-palmeira-jara.html>

The musical instruments used in the performances of Tapyra'yawara songs are made in the community itself and the surrounding communities. In Tapyra'yawara's musical ensemble, the banjo is the main harmonic instrument, the atabaque is the percussion instrument, and Mestre Ercílio's voice performs the plot throughout the songs. Sometimes the insertion of closed rattles or even the participation of musicians from the surrounding communities is admitted, as long as there is a prior consensus among the musicians who already work in this cultural event.



**Figure 7.** Tapiraiaua's musical ensemble. From left to right: Dival (atabaque), Mestre Zequinha (banjo) and Mestre Ercílio (singer and composer)

### 3. About the Methodology

As a recording artist I have developed in the last ten years, deep affective and sound relationships with the masters of oral tradition in the municipality of Maués. Together we have produced many artistic collaboration, from the presentation of concerts to the filming of audiovisual projects. Through this horizontal relationship built with these musicians, I have joined them in their struggle to safeguard their cultural and environmental heritage. Therefore, I opted for a methodological path that would allow me to talk “with” the community and not just “about” it. I found in collaborative action research a set of tools that allowed me to work together with these musicians, involving them as active subjects in the production of knowledge and being involved by them in their processes. The experiences of Samuel Araújo (2006); Laíze Guazina (2016); and Luke Lassiter (1998) with his remarkable collaborative ethnography “The Power of Kiowa Song”<sup>7</sup>, as well as the long-term collaborative relationship that Anthony Seeger developed with the Suyá/Kisedjê people<sup>8</sup> inspired me in this journey. In this methodological path so particular and full of specificities

<sup>7</sup> In this work, Lassiter brings the beauty and difficulties of an ethnography carried out with the Kiowa people. Along the way, he also tells about his process of learning Kiowa chants and his legitimation as a non-indigenous singer among indigenous singers.

<sup>8</sup> “Why Suya Sing: A Musical Anthropology Of An Amazonian People” is another remarkable musical ethnography that took place in the Amazon region around the 1970s. Anthony Seeger brings us a very consistent experience of how musical research in the Amazon can be a strong ally in safeguarding the intangible and environmental heritage of an indigenous community. In his relationship of more than 40 years with the Suya/Kisedjê people, he was directly involved in vital achievements for this people, such as the demarcation of their territory threatened by agribusiness.

that I ended up deciding to call it “collaborative ecomusicology,” Lühning & Tugny (2016) also inspire me to build with these musicians new epistemologies from the sharing of their different worlds and knowledge, to stimulate a process of (re)cognition of themselves and their consolidation as protagonists of their own stories, struggles, and achievements.

I exemplify this active involvement of the community as a generator of knowledge, and not just as a passive community to be observed and described, through some direct actions that are implied in the research writing and analysis process: 1) the use of native categories to explain everything: in the music-making in Tapyra’yawara Dance, for example, the musical pieces are called by the composer himself and by the musicians “cantigas” and not “song;” “Tapyra’yawara” also gives its name to the rhythm and musical genre; “Tapyra’yawara” is categorized by its participants as “revelry,” which comprises the entire set of musical, dramatic, dance performances and also the production of scenarios.

However, it is essential to emphasize that this methodological path consists of a process of constant negotiation between the primary researcher and the co-researcher community because, at times, it is necessary to resort to categories already established in musical and anthropological literature to translate this set of performances into concurrent events that occur in Tapyra’yawara. I exemplify the adoption of the “dramatic dance” as defined by Mário de Andrade<sup>9</sup> to typify Tapyra’yawara Dance as a set of cultural practices that culminate in June. Although Tapiraiauara has already been mentioned in Ávila (2016) as a dramatic dance, I decided to resort to the community again to reaffirm this typification. The adoption of this category was reiterated through a meeting with the players, where I explained Mário de Andrade’s concept. In a collective reflection, we reaffirm this typification for this study.

#### **4. Conclusion**

Maués is a municipality with an environmental heritage recognized worldwide for its many endemic animal species, noble woods such as rosewood, ipê, and gold. It has at least seven public areas for environmental protection and housing the Andirá-Marau Indigenous Land, where the Sateré-Mawé ethnic group lives. It has been a constant target of illegal activities such as logging, mining, trawling, and land grabbing.

The music-making in Tapiraiauara Dance, in addition to performing an eco-criticism of the location where it is completed, highlights the construction of environmental values and the feeling of belonging to the place as an identity enhancer, articulating resistance and re-existence through sound activities in a scenario of constant destruction of biodiversity and profound threats to ways of living in synergy with nature.

The adoption of a methodological approach that positions co-researchers in a horizontal knowledge production has proven to be a compelling and promising proposal, especially in terms of the revitalization of cultural practices in communities in the interior of the Amazon, as it involves not only participants in these practices but all the inhabitants, albeit indirectly. Realizing that their music-making and culture are objects of interest to outsiders, the forest artists understand the

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<sup>9</sup> Mário de Andrade includes under the generic term of “dramatic dance” not only dances that develop a dramatic action, but also all group dances that, as well as sticking to a given traditional and characterizing theme, respect the principle of the suite form; that is, a musical work that consists of a series of several choreographic pieces. (ANDRADE, 1982, p. 71)

importance of their messages to the world, increasingly taking a leading role in their processes. This reinforces the revolutionary role that collaborative music research can play in small communities in the Amazon and deep Brazil, whose cultures are often judged as products of lesser aesthetic value, as they are outside the cultural industry circuit of the capitalist world.

## References

- ACOSTA, Maria. ÁLVAREZ, Sérgio. El ruido de Tapira. In: ACOSTA, Maria. ÁLVAREZ, Sérgio. Cuentos y leyendas de America Latina. Océano: Barcelona, 2006.
- ALLEN, Aaron. S. DAWE, Kevin. Ecomusicologies. In: Current Directions in Ecomusicology. Taylor & Francis: New York, 2016.
- ANDRADE, Mário de. Danças Dramáticas do Brasil (1º Tomo). Belo Horizonte: Itatiaia, 1982. p.23–93
- ARAÚJO, Samuel. A violência como conceito na pesquisa musical: reflexões sobre uma experiência dialógica na Maré, Rio de Janeiro. Trans. Revista Transcultural de Música, n. 10, 2006. Disponível em: <https://www.redalyc.org/comocitar.oa?id=82201007>. Acesso em: 13 de maio de 2018.
- ÁVILA, Cristian Pio. Os argonautas do Baixo Amazonas. Tese (Doutorado em Antropologia Social) – Universidade Federal do Amazonas, 2016. Disponível em: <https://tede.ufam.edu.br/handle/tede/5417>. Acesso em: 20 de junho de 2017.
- CÂMARA CASCUDO, Luís da. Dicionário do Folclore Brasileiro. Global: Rio de Janeiro, 2012.
- DIEGUES, Antônio Carlos. O mito moderno da natureza intocada. HUCITEC: São Paulo, 2001.
- INTERNATIONAL UNION FOR CONSERVATION OF NATURE. Red List of Endangered Species. Disponível em: <https://www.iucnredlist.org/>. Acesso em: 20 de janeiro 2022.
- LASSITER, Luke. The Power of Kiowa Song: A Collaborative Ethnography. Arizona University Press, 1998.
- LÜHNING, Angela. TUGNY, Rosângela Pereira. Etnomusicologia no Brasil. EDUFBA: Salvador, 2016.
- PICCIN, Paula. Anta: a jardineira da Floresta. Revista Eco 21, nº 271, jun. 2019.
- SILVA, Alexandre Vilas Boas da. ROLIM, Anderson Teixeira. Consciência ecológica em Tapiiraiaua de Guimarães Rosa. Revista Estação Literária. Londrina, Volume 17, p.135-147, jul. 2016.
- SMALL, Christopher. Musicking – the meanings of performing and listening. A lecture. Music Education Research, n. 1:1 (1999), 9–22 p.
- SOUZA, Adeilso Oliveira. Entrevista concedida a Karine Aguiar S. Saunier. Comunidade de Santa Maria do Maués-açu, 12 jul 2018. Vídeo. 29 min 27s. Não publicada.

TUAN, Yi-Fu. Topofilia: um estudo da percepção, atitudes e valores do meio ambiente. Difel: São Paulo, 1974.

YAMÃ, Yaguarê. SEHAYPÓRI: o livro sagrado do povo sateré-mawé. Peirópolis: São Paulo, 2019.

## **Biography**

Karine Aguiar de Sousa Saunier is a recording artist and researcher born and raised in the city of Manaus, nested in the heart of the Brazilian Amazon rainforest. She has a masters in Environmental Sciences and Sustainability in the Amazon (Universidade Federal do Amazonas) and now is a PhD candidate at Universidade de Campinas (UNICAMP), where is developing a research project with Amazonian Ecomusicologies under Suzel Ana Reily's supervision and funded by Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES).

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# Becoming World: Reimagining the Material Self

Julie Gemuend

Powered by the materiality of the body and its entanglement with the physical world, my interdisciplinary research-creation project addresses the relationship between two landscapes – one outside the self, the other within. Drawing on my performance-based video series titled *Imprint*, I engage the body as a conduit and a canvas by imprinting the landscape upon human skin. This interplay of interior/exterior understands the skin as a “physical membrane that sheds and reconstitutes itself continually, the flesh is never the same material but always a contour in process ... a permeable, shifting physical parameter” (Jones 2006). In other words, we let the world in whether we want to or not.

I address this vulnerability through Stacy Alaimo’s concept of “trans-corporeality” which emphasizes the human body as a site across which substances and forces are constantly crossing and by which human beings are inseparable from the environment, both natural and man-made (2010). This means that not only are we physically vulnerable to other beings, but also we are responsible for them. As the concept of trans-corporeality relates specifically to nature and the environment, it encourages us to reimagine questions of environmental ethics and practices as deeply personal. If, as Ulrich Beck posits, we live in a “risk society” where we can no longer assess the dangers of life, we must ask ourselves on a daily basis: what is safe? What is not safe? How do we know (Beck)? This kind of thinking changes how we move around in the world. We begin to think *through* the fact that our bodies are persistently confronted with myriad harmful and invisible substances, such as manufactured chemicals. Trans-corporeality reveals that the environment and our material selves are bound up with one another in a deeply intimate manner and encourages a reconsideration of ourselves as porous, messy, entangled, and embodied beings.



Julie Gemuend, *Untitled*, 2020, video still from *Becoming World*



Julie Gemuend, *Untitled*, 2018, video still from *Imprint*

My research mines trans-corporeal evocations across the arts, seeking the ways in which the world takes up residence in the body. For instance, during WWII, modern dancer Martha Graham observed how daily newspaper headlines affected the muscles in the bodies of her dancers. Not all trans-corporeal exchanges are troubling – pleasure, too, can spiral through these material encounters. Wendell Berry’s notion of “extensive pleasure” for example, in which aesthetics, enjoyment, and politics triangulate in the practice of consuming food. Taking pleasure in a meal with the “accurate consciousness of the lives and the world from which the food comes” (qtd. in “Exposed” 27) imparts a special kind of delight and gravitas of deeper meaning. In the vein of pleasurable transactions, we might also consider the process of hormesis, which occurs when a cell or an organism demonstrates a beneficial reaction to the exposure of increasing amounts of a certain substance or condition. Low exposures to toxins and other stressors such as radiation are used in microdoses to cure some forms of cancer. Envisioning the world as an enchanted, lively place of surprising pleasures and invisible dangers can foster connection, interrelation, and intersubjectivity.

The figure of the hypersensitive human best embodies the concept of trans-corporeality, and also serves as an implication of the crumbling sustainability of Western liberal humanism and its autonomous, self-contained notion of the human. I aim to reframe the hypersensitive body as a highly calibrated instrument of perception, a thin-skinned, exceedingly responsive, perhaps hyper human. Those who suffer from environmental illness, for example, might be reconsidered as clairvoyants possessing a supernatural awareness. Such bodies “constitute very finely tuned instruments which can measure potentially toxic chemicals at very low levels” (“Bodily Natures” 130). The body is filled with messages to be uncovered, both cryptic and debilitating in kind. As Virginia Woolf reminds us, the “poverty” of the English language often interferes with the representation of illness. Though language can effectively “express the thoughts of Hamlet and the tragedy of Lear, [English] has no words for the shiver and the headache” (Woolf 34). Hypersensitive bodies endure an intimate, often occult experience of illness, such that the challenge of articulation may hinder the transferability of knowledge. Pain is difficult to convey. This is why embodied communication and forms of artistic, creative and imaginative expression are so important in understanding the experience of others. The hypersensitive body, then, like a canary in a coal mine, could be perceived as a warning to those who do not or cannot yet sense the danger.



Julie Gemuend, *Untitled*, 2018, video still from *Imprint*

Powers of intuition are definitely at play here. Intuition is the “natural ability to understand or perceive something immediately without consciously using reason, analysis, or interference” (Repko and Szostak 273). Often aligned with the emotional and sensual experiences of the body rather than the mind, intuitive ways of knowing are frequently relegated to the status of the subjective, and its contribution in the process of how we come to understand the world and ourselves suppressed. My research endeavours to achieve an equilibrium between intellect and intuition – as both are necessary for developing new integrative approaches. I believe, as does Bertrand Russell (2009), that the union of the intuitive and the empirical is our most promising conduit to truth, for intuitive thinking offers a powerful complement to the scientific lens on reality.

This intersection of intellect and intuition, or research and creation, is fundamental for the future of scholarly investigation. In times of uncertainty, panic, and grief – and we are grieving, according to Slavoj Žižek (2011), over the state of economic, social, and ecological demise – we turn to art; for the sake of pleasure and relief, yes, but also as a source of meaning, for guidance. Art can recalibrate relationships in and through materialities, across spaces and places, with humans and nonhumans, and help us forge strategies for living with others in the yet-to-come.

We live in a science-based society, which tends to nurture certainty over questioning. Uncertainty is the currency of intuition – of magic. Considering the unprecedented times we are living through, and the fact that our research should strive to both reflect and shape the world we live in, intuitive thinking is urgently necessary. As writers we cast spells through language, weaving words together to bring the contours of our world to light. If we follow Deleuze and Guattari and imagine ourselves as sorcerers, it may empower us to craft work that has the potential to enact real change and give rise to new configurations (240).

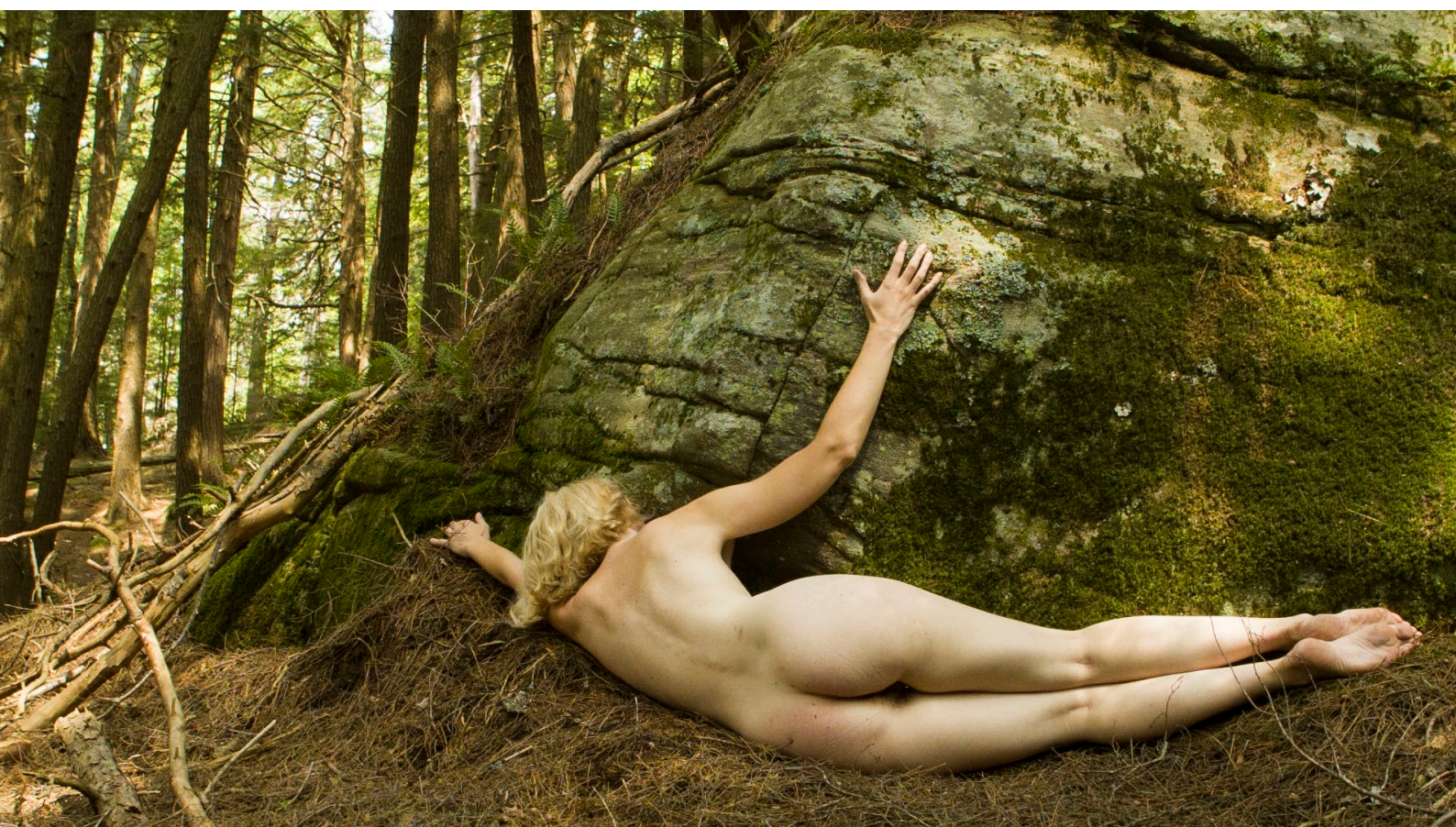
Interdisciplinary travel like skipping stones, not only across disciplines, troubling their boundaries with the ripples they leave behind, but also beyond the academy, invoking insights from realms that exist outside of what is deemed “academic.” Interdisciplinary sink, as all stones do, below the surface, to stir up “the passions of the heart, the thoughts of the mind, the delights of the senses” which according to Arendt “lead an uncertain, shadowy kind of existence” (41). Embodied, intuitive and imaginative ways of thinking are transformed by interdisciplinary research into a shape



Above and Below: Julie Gemuend, Untitled, 2018, video still from *Imprint*

fit for public appearance insofar as “each time we talk about things that can be experienced only in privacy or intimacy, we bring them out into a sphere where they will assume a kind of reality which they never could have had before” (41).

My research comes from deep attention to intuitive and embodied impulses as well as our interconnections with the elements of the living world. I feel a responsibility to share those often overshadowed ways of knowing, in an effort to help people fall in love with the world again. The title of my project, “Becoming World”, is borrowed from one of Rainer Maria Rilke’s letters wherein he writes that “loving ... is a high inducement for the individual to ripen, to become something in himself, to become world in himself for the sake of another person; it is a great, demanding claim upon him, something that chooses him and calls him to vast distances” (24). And this is where I’d like to end, on the possibility of a restored love that wields the (magic) power to recuperate, if only partially, our world and our place within it.



## Works Cited

- Alaimo, Stacy. *Bodily Natures: Science, Environment, and the Material Self*. Indiana University Press, 2010.
- Alaimo, Stacy. *Exposed*. University of Minnesota Press, 2015.
- Arendt, Hannah. *The Human Condition*. University of Chicago Press, 1998.
- Beck, Ulrich. *Risk Society: Towards a New Modernity*. Sage Publications, 1992.
- Deleuze, Gilles, and Felix Guattari. *A Thousand Plateaus: Capitalism and Schizophrenia*. University of Minnesota Press, 1987.
- Jones, Amelia. *The Feminism and Visual Culture Reader*. Routledge, 2003.
- Repko, Allen F, and Rick Szostak. *Interdisciplinary Research: Process and Theory*. Sage Publications, 2017.
- Rilke, Rainer Maria. *Letters to a Young Poet*. Scriptor Press, 2001.
- Russell, Bertrand. *Mysticism and Logic and Other Essays*. Cornell University Library, 2009.
- Woolf, Virginia, *On Being Ill*. Paris Press, 2002.
- Žižek, Slavoj. *Living in the End Times*. Verso, 2011.

## Biography

Julie Gemuend is a Canadian artist. She received her MFA from Ryerson University. Her practice is aligned with a number of intersecting movements that emerged in the 1960s, including performance-based video, body art, and land art. In her work, Julie aims to explore our profound connection with the natural world by probing the edges of identity and environment, interiority and exteriority, the tamed and the wild, and the places where the two merge. She employs her body to speculate on theories concerning the self, space, and materiality within the context of the human body and its relationship to the physical world. She has participated in various artist residency programs in North America and abroad and exhibits her work internationally. She is currently completing a research-creation-based Ph.D. in Interdisciplinary Humanities at Brock University.

# **The cry of Merlin: The self-confessional and self-judgemental lament for dismembered landscapes, riverscapes, skyscapes, and oceanscapes in the language of Wilson Harris's fictional narratives**

Shareed Mohammed

The destruction of the natural environment and its connection to global climatic changes need to be analyzed not only with the lens of scientific research but also through variable conceptions in the arts. The literary writings of the Anglophone Caribbean have made important and critical contributions to both local and universal issues of environmental degradation and climate change. Wilson Harris is one Anglophone Caribbean theorist and fiction writer who claims that there “lingers an unspoken apprehension of an incalculable price to be paid in pollution, in the extinction of species, and in other elemental implosive cycles which leave their shadow upon the psyche of nature” (“Merlin and Parsifal: Adversarial Twins” 62).

Wilson Harris terms such “unspoken apprehension” as the cry of Merlin or Merlin's cry<sup>1</sup>. This cry or quality of voice represents a self-confessional and self-judgemental lament for the destruction of the natural environment. It is essential in terms of the meaning of Wilson Harris's work that his readers should trace Merlin's incomprehensible cry or lament in the language of his fiction. It is Harris's claim that literary artists should be “imbued with a sensation of profound necessity in the life of the imagination to visualize links between technology and living landscapes in continuously new ways that [takes] nothing for granted in an increasingly violent and materialistic world.” Subsequently, the “haunting and necessary proportions of a new dialogue with [the] reality” of “an anatomy or shared body everywhere in all things” (“The Music of Living Landscapes” 43) can be represented in the language of fiction. This paper argues that Harris's use of metaphorical language in his fictional novels breaches the hubris of technological progress and echoes a quality of voice or redemptive cry for the fate of nature. The author will further demonstrate that the dense metaphorical language of Harris's fictional novels can both assist our understanding and offer an illuminating perspective of the dismemberment of the natural world by humanity's ruthless materialism.

The technological achievements of many industrialized countries are governed by fixed economic and political policies. Such established legislation sometimes serves only to mask the reality of a voiceless endangered environment. It therefore suffocates real and genuine dialogue in spite of the numerous contrivances of public relations it may promote in the name of environmental

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<sup>1</sup> Harris formulates the perception of Merlin's cry from the Arthurian legend of Merlin and Parsifal. For an elaboration of this legend, see “Merlin and Parsifal” 59.

awareness. The danger of scientific advancement is explicitly depicted by Lewis Mumford in his seminal work, *The Myth of the Machine*. Mumford argues:

With mordant symbolism, the ultimate products of the megamachine in Egypt were colossal tombs, inhabited by mummified corpses; while later in Assyria, as repeatedly in every other expanding empire, the chief testimony to its technical efficiency was a waste of destroyed villages and cities, and poisoned soils: the prototype of similar 'civilized' atrocities today. As for the great Egyptian pyramids, what are they but the precise static equivalents of our own space rockets? Both devices for securing, at an extravagant cost, a passage to Heaven for the favored few.

These colossal miscarriages of a dehumanized power-centered culture monotonously soil the pages of history from the rape of Sumer to the blasting of Warsaw and Rotterdam, Tokyo and Hiroshima. Sooner or later, this analysis suggests, we must have the courage to ask ourselves: Is this association of inordinate power and productivity with equally inordinate violence and destruction a purely accidental one? (180)

The destructive impact of human invention on the natural environment of which Mumford speaks, in tandem with his negation of the excessive waste and futility of scientific advancement, yields a moral predicament of our current era.. The use of technology to harvest and consume the Earth's resources has resulted in environmental abuse, and yet ironically there remains a profound desire for preservation and conservation. Moreover, the involvement of man-made materials in threatened species and landscapes and above all the mistranslation of the turbulent energies of climate change have made humanity blind to the strange, disturbing and echoic cry of nature.

This resonating signal or Merlin's cry from the living landscapes represents that breach in the "treaty of sensibility" ("Profiles of Myth and New World" 202) between human presence and the living landscapes on this planet. It is Harris's view that this intricate and invisible connection between humanity and the living landscapes constitutes "Ancient vestiges of synchronicity [or] linkages that are 'a-causal.'" He claims that such links stagger our human "logic of cause-and-effect realism" ("Merlin and Parsifal" 61–62). Harris's acausal or quantum linkage of humanity and the natural landscapes may well arouse us to consider Karen Barad's ethico-onto-epistemology. Barad's ethico-onto-epistemology can be regarded as a form of quantum entanglement. In Barad's quantum linkage, humans are not simply innocent bystanders observing the world from a free-standing perspective; they must be ethically accountable for the natural environment. As Barad put it: "Humans (like other parts of nature) are of the world, not in the world, and surely not outside of it looking in...We are responsible not only for the knowledge that we seek but, in part, for what exists" (*Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*, 206–207).

Harris further argues that the callous rupturing of the acausal or “quantum links” (“The Fabric of the Imagination” 79) of the landscapes / riverscapes / skyscapes / oceanscapes are found in Merlin’s cry. It is his view that such a “*quality of the voice in ourselves* is elusive, it cannot be seized, but its enormous truth seems to [him] the very essence of dialectic and numinous art, the essence of living diversity which tends in a progressive age to be flattened” [Harris’s italics] (“Merlin and Parsifal” 61–62). That very self-judgement and self-confession generates a discontinuity within technological imperatives or the rule of machines. Such a caveat may lead to a transformation or conversion of a ruling scientific ego to an understanding of the indeterminate yet coherent unity of being amongst all landscapes.

Moreover, this indeterminate unity of being, or quantum entanglement, undermines the perception of the Earth’s activities as conforming to a strict statistical formula or tamed identity. The shamanic writer such as Wilson Harris is therefore susceptible to comprehending and becoming genuinely involved with the innermost acausal cycles of planet Earth that defy relativistic cause-and-effect reality. This illuminating quantum vision would allow the writer to translate those implicit disruptions or cries of the Earth’s protective linkages between human presence and the natural environment. The breach in such acausal or quantum links in nature by human technological progress arises to affect the language of Harris’s fiction. The shamanistic quantum vision of these entanglements causes a rare pressure of imagery within Harris’s linear mental contours or configurations of the landscapes. They loom into Harris with such astonishing echoic force that he can no longer remain blind to them. His mental linear configurations or fixed causal boundaries of the landscape are now replaced by non-configuration or acausality. According to Harris “In describing the world that you see, the language evolves and begins to encompass realities that are not visible” (“A Conversation with Wilson Harris” 265). This fissure in the invisible or quantum linkages between humanity and the living landscapes erupts as the ventriloquist of Spirit<sup>2</sup> or Merlin’s cry in the obscure clusters of imageries in Harris’s fiction. Here is an example from his novel *The Four Banks of the River of Space*:

*I threw the knife far up into space. It glittered. It flashed. It was a conveyor, a satellite of knowledge...It glittered. It flashed. Then all at once it shot like lightning into the body of a flying creature...I heard...the flying creature’s long, sweet, poignant bitter*

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2 The term ventriloquist of Spirit is a shamanistic concept that was formulated by Wilson Harris. It is used synonymously with Merlin’s cry in Harris’s theoretical writings. It refers to sounds in the natural landscapes that are inaudible to the human faculty of auditory perception. For an in-depth explanation of this concept, see “Profiles of Myth and the New World” 207.

lament as if a note had been struck in the darkest recesses of melodic Conscience. The lightning knife had found its mark. The winged, dancing, flying bird appeared to pause in the twinkling of an eye within us, within inner space, glimmering stillness yet lightning apprehension of the geology of the tides through which to build the architecture of the City of God or to topple El Dorado into further ruin.

The angelic dancer fell with open, outstretched wings. It fell downwards (or was it backwards into the upturned vessel of the sky in which the sun shone like a pooled star within a drought of cloud?) Glimmering star/sun or floating eyelid of the abyss. I listened for the splintering note of the knife upon the head of rock but heard nothing... I was unsure.

Did the dancer and the knife fall and rise upon an ozone door, a toppled, ruined, tidal door in the greenhouse drought spectre of Earth and sky? Every epitaph for a dying savage tribe's angel of beauty witnesses to an abyss we need to visualize, distances and architectures we have befouled, an abyss between a knife in the sky and a knife on the Earth. A double-edged knife! It pierces us with the necessity for a visionary change of heart, for a new sculpture of being (302–303).

In this extract, the knife represents the man-made excavations or fissures into those acausal linkages in the living landscapes that support the Earth's life-sustaining cycles. These man-made cuts into the quantum fabric of nature result in Merlin's painful cry. The destruction of the quantum links between the landscapes, skyscapes, riverscapes and oceanscapes is represented in the incoherent images of "the dancer and the knife" that "fall and rise upon an ozone door, a toppled, ruined, tidal door in the greenhouse drought spectre of Earth and sky." However, the translation of Merlin's cry into humanity's ruthless logic of a cause-and-effect reality staggers and forces the reader to "visualize" the severed linkages or "architectures" that have been "befouled."

Moreover, the living landscapes in this extract from *The Four Banks of the River of Space* operate in a quantum superposition<sup>3</sup> of simultaneous states since they seem to be in parallel places at the same time. The acausal linkages or treaty of sensibility between humanity and the landscapes are clothed and re-dressed in counterintuitive images such as the "ozone door", which is interfused with "the tidal door in the greenhouse drought spectre of Earth."

This obscure or secretive vocabulary is the hidden textual reality of the living landscapes, the plant and animal kingdom that only the initiated shamanic writer, such as Harris, could *hear* and see. Harris contends that through the art of language such acausal connections or

interweaving implicitly raises a reality that cannot be glossed by appeals to poetic ornament or picturesque metaphor. The hinge of their expression implies an

3 The quantum physicist Fred Alan Wolf in *The Dreaming Universe* states that "A quantum system usually exists in a superposition of states. This means that there is a relationship between the various possibilities of an outcome in a quantum physical environment...And before any observation, all possible states are said to exist simultaneously" (161).

architecture of the imagination fuelled by a 'new conceptual language' in which the 'sense-organs' of creature-in-creation elicit a *quality* of voice and expression unlike conventional, one-track progressive realism. ("Merlin and Parsifal," 61–62)

Such quantum links between the living landscapes are therefore achieved in conventional communication. The translation of those untranslatable sights, sounds, feelings, thoughts, utterances, and rhythms from the living landscape into the English language represents Harris's "spatial logic or convertible property of the imagination." ("The Writer and Society" 51) The representation of an acausal reality within human language therefore becomes a psychophysical discourse.

The quantum vision of those acausal linkages in the living landscapes is also present in Harris's novel, *The Infinite Rehearsal*. In this novel, there is an eruption of Merlin's cry as human technological progress breaches the delicate quantum links of the living landscapes in the following clusters of imageries:

I asked Ghost who flew in the shadow of a wave and a hill but his lips were sealed though a strange cry trembled in the recesses of the coming Skull but remained short of utterance... I raised my hat to Faust as the flock of my terrors skimmed a wave and settled on the ground in the belly of the sacred wood... *The wood was in a state of alarm*. And indeed I sensed a change in the disposition of the tenant in my Shadow. Ghost was alarmed and uneasy at the intrusion of brute climates, brute absolutes, in the communication of ideas under the sea and over the sea that Faust had converted into a machine, fish of steel, fish of lead, fish of iron, birds of steel, birds of lead, birds of iron. The mechanics of the circus of power on sea on land made Ghost tremble on his flying trapeze in the belly of the sacred wood, the mechanics of domination in the name of Brute Prosperity or in the name of Brute Necessity. (185)

The "flying creature's long, sweet, poignant bitter lament" or Merlin's cry that is "struck in the darkest recesses of melodic Conscience" from *The Four Banks of the River of Space* also appears in this novel as the "strange cry." The pollution of the living landscapes is represented in images such as "fish of steel, fish of lead, fish of iron, birds of lead, birds of iron." The "umbilical cord" or quantum link of the living landscapes have been severed and subsequently the Earth signals a warning of "brute climates."

It is this breach of the asymmetrical network of associations in the living landscapes that resonates with Johan Rockstrom's notion of the planetary boundaries framework. According to Rockstrom et al., "transgressing one or more planetary boundaries may be deleterious or even catastrophic due to the risk of crossing thresholds that will trigger non-linear, abrupt environmental change within continental-scale to planetary-scale systems" (1). For instance, Rockstrom et al. notes that the "deforestation in the Amazon...may reduce water resource availability in Asia"

(19). Rockstrom's theory of planetary boundaries is mentioned because it achieves an explicit correspondence with Harris's shamanistic treaty of sensibility perspective. Harris, in fact, did theorize that humanity's fissuring of the Earth's natural cycles would result in catastrophic consequences. One of his prime ecological assertions is that "Nature is not passive. Nature erupts into orchestras of Nemesis" ("The Music of the Living Landscapes" 43). In this context, a breach in the treaty of sensibility is consistent with "brute" climatic reprisals.

It is significant to note that both Harris and Rockstrom, in their involuntary association, share a certain kinship towards humanity's self-responsibility for dismembered landscapes. Harris's perspective that humanity should "achieve a narrow scale of self-preservation and...maintain this within the diverse species that they manipulate or exploit" ("Profiles of Myth and the New World" 208) shares a similarity with Rockstrom's call for humanity to ensure that there is a mutual alliance between technological progress and the living landscapes. This treaty of sensibility is highlighted in Rockstrom's words: "Humanity thus needs to become an active steward of all planetary boundaries... in order to avoid risk of disastrous long-term social and environmental disruption" (21),

This essay has interrogated Wilson Harris's deliberate use, in his fictional works, of dense metaphoric images that give voice to Merlin's cry, or the self-confessional and self-judgemental lament for dismembered landscapes, riverscapes, skyscapes, and oceanscapes. The author has also argued that such an echoic cry may result in the transformation of humanity's addiction to a technological progress that has destroyed, and continues to destroy, the physical environment. If such scientific advancement did not sever those vital life-sustaining quantum links of the living landscapes, humanity would not be faced with the difficult challenge of attempting to reverse current environmental degradation and climate change. The dismemberment of the living landscapes is rooted in a nation's ruling economic, social and political premises. The acceptance of such governing codes gives the freedom to rupture those quantum linkages amongst the living landscapes and to turn away from the possibility of reconstructing the sacred architecture of the natural world. Perhaps, a fusion of environmental science with a shamanistic visualization of the living landscapes can bring about a genuine creative conscience and redemptive change of heart and mind towards the entanglement of all entities.

## Works Cited

- Barad, Karen. *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Duke UP, 2007.
- Bundy, Andrew. editor. *Selected Essays of Wilson Harris: The Unfinished Genesis of the Imagination*. Routledge, 1999.
- Harris, Wilson. "Merlin and Parsifal: Adversarial Twins." *Bundy* 58–66.
- Harris, Wilson. "Profiles of Myth and the New World." *Bundy* 202–211.
- Harris, Wilson. "The Music of Living Landscapes." *Bundy* 40–46.
- Harris, Wilson. "The Fabric of the Imagination." *The Radical Imagination: Lectures and Talks by Wilson Harris*. 73–79. Alan Riach and Mark Williams, editors, 1992.
- Harris, Wilson. *The Four Banks of the River of Space*. Faber & Faber, 1990.
- Harris, Wilson. *The Infinite Rehearsal*. Faber & Faber, 1987.
- Harris, Wilson. "The Writer and Society." *Tradition, The Writer and Society: Critical Essays*. New Beacon Publications, 1967. pp. 48-64.
- Mumford, Lewis. *The Myth of the Machine: Technics and Human Development*, Vol. 1. Brace & World, 1967.
- Possi, Monica. "A Conversation with Wilson Harris." *Journal of Caribbean Literatures*, vol. 2, no. 1/2/3, Spring 2000, pp. 260–70.
- Rockstrom, Johan et al. "Planetary Boundaries: Exploring the safe Operating Space for Humanity." *Ecology and Society*, vol. 14, no. 2, 2009, pp. 1–33. <http://www.ecologyandsociety.org/vol14/iss2/art32/>
- Wolf, Fred A. *The Dreaming Universe: A Mind-Expanding Journey Into the Realm Where Psyche and Physics Meet*. Touchstone, 1995.

## Biography

Shareed Mohammed is currently a PhD candidate in the Literatures in English programme at the University of the West Indies, St. Augustine Campus, Trinidad and Tobago. His PhD thesis aims to demonstrate that Wilson Harris's shamanistic quantum imagination results in the creation of a re-visionary and cross-cultural poetics. His thesis is supervised by Dr. Jassodra Vijay Maharaj. His most recent conference paper entitled "L'envoi Morts (sending of the dead): Wilson Harris's Instrument of Challenge and Disruption to the Territorial Language of Progressive Realism" was presented at the University of the West Indies/University of Leicester 2021 International Summer School Online Workshop.

## On touching

A moving image story of a collaboration with a total eclipse of the sun

Emilio Chapela

### Abstract

This visual essay comprises three works of video that I recorded during a total eclipse of the sun in the USA in 2017 that challenge the underlying habit to think about the world as a static entity. Following Donna Haraway, and recognizing the incapacity to control an immeasurable world that exceeds our representations, I propose this essay, which combines moving images with text, to 'think with' the world through a total eclipse of the sun, an event that is greater than the movement of the planets that cause it: It is a cultural, scientific, affective and economical phenomenon. I rehearse three ways to come close to the world by 'touching', as an alternative to representations, and as a form of entanglement with the world, in the context of Karen Barad thinking.

This visual essay is divided in three main parts containing each a video sequence recorded during the eclipse that is accompanied by text. It is recommended to both see and read these materials entirely.



## Preface

This is a story that follows my effort to produce a video work in collaboration with a total eclipse of the sun that I witnessed in the USA in 2017, which resulted in a series of moving images that according to my first assessment, did not come to fruition as artworks. It can be said that I failed. However, the resulting videos are presented here as tools (or ‘flawed’ devices) to think through the eclipse, diffractively (Barad, 2007), about matter, movement and its representations.

Keeping in mind the specificities of the total eclipse, this text, along with its accompanying videos, inquires how to attune to ecologies of vibrant matter and movement, where agency moves distributed across networks (Bennett, 2010). I do this by means of diffraction, which is an approach for “reading insights through one another in attending to and responding to the details and specificities of relations of difference” (Barad, 2007, p. 30). Accordingly, I use the videos presented here, and the text that accompanies them, to think the world with —and through— the total eclipse of the sun, and its various material, affective and agential manifestations.

<https://vimeo.com/641074384/a359c92cf6>



I turned my camera towards the eclipse.



but hesitated

A dark, rocky landscape under a twilight sky with a faint rainbow.

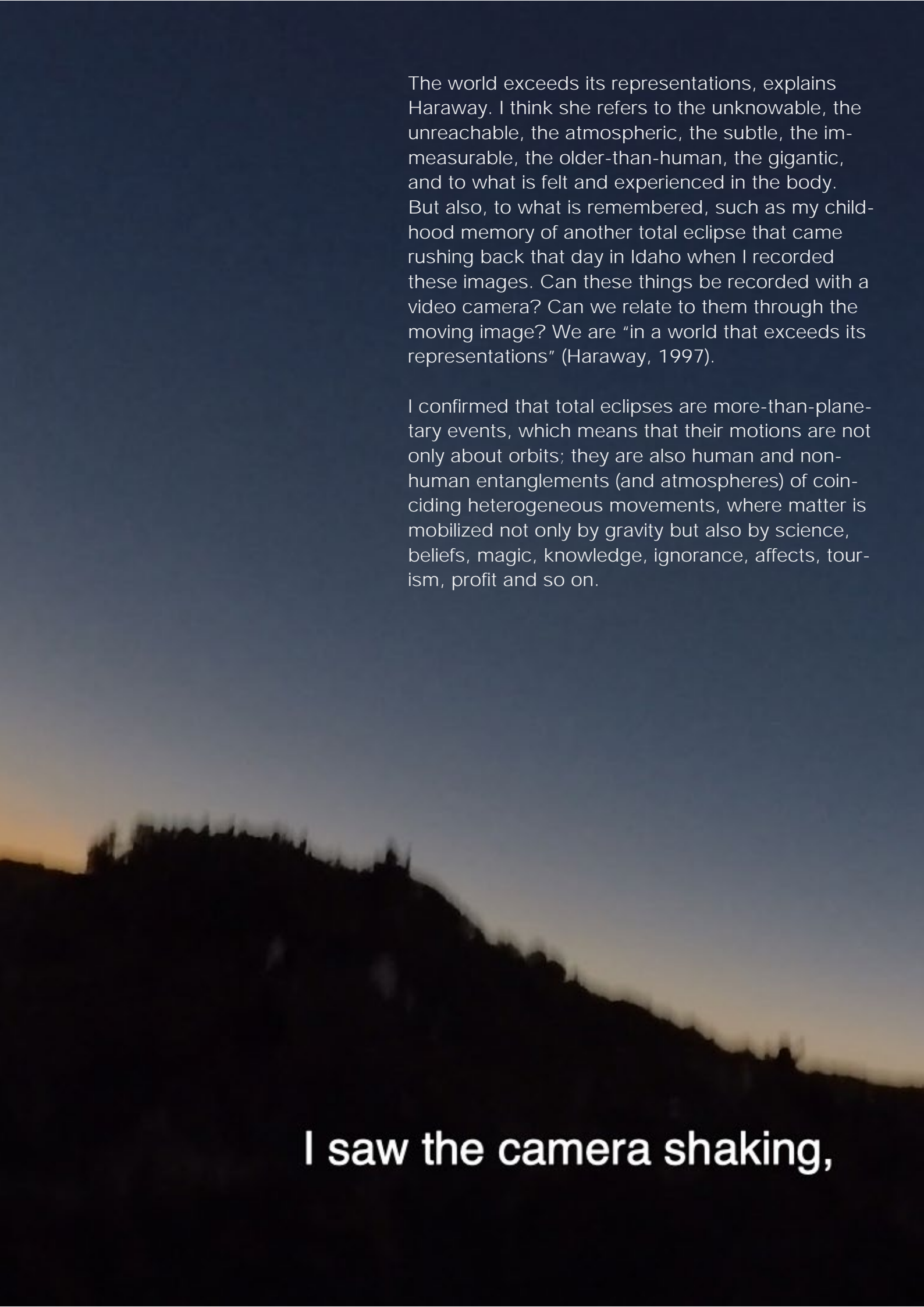
I

I found the total eclipse of the sun to be exciting and captivating, but the videos I produced felt too short to anticipate and encompass the whole gamut of movements and temporalities that enfold and coincide, prior to and during the duration of the event: there is excitement as expectation grows; people prepare their cameras and telescopes, they meditate and perform rituals; animals become restless; the light changes; the atmosphere feels charged, vital. Just before totality, the moment when the sun is completely obscured by the moon: "There's a pause, a temporal suspension animated by the sense that something is coming to existence", says Kathleen Stewart, referring to a form of attunement in expectancy of something that is about to change (Stewart, 2011, p. 446).

Suddenly, it was dark. The light changed incredibly fast. I saw the shadow of the moon obscuring the Idaho plains. I heard a plane flying and people screaming. I wanted to record many things on video, or take a picture with my mobile, so I kept alternating from one camera to the next. I wanted to enjoy myself too. I thought about the strange need to document everything with a camera. I felt confused.

Hours later, I saw the images I recorded with a handheld camera. It showed my confusion and anxiety. I thought it was terrible. I had failed.

<https://vimeo.com/641070083/740beea952>

The background of the entire page is a photograph of a dark, silhouetted landscape, likely a forest or a hillside, under a twilight sky. The sky transitions from a deep blue at the top to a lighter, hazy orange near the horizon. The silhouette of the land is jagged and irregular, with some peaks and valleys visible. The overall mood is quiet and contemplative.

The world exceeds its representations, explains Haraway. I think she refers to the unknowable, the unreachable, the atmospheric, the subtle, the immeasurable, the older-than-human, the gigantic, and to what is felt and experienced in the body. But also, to what is remembered, such as my childhood memory of another total eclipse that came rushing back that day in Idaho when I recorded these images. Can these things be recorded with a video camera? Can we relate to them through the moving image? We are "in a world that exceeds its representations" (Haraway, 1997).

I confirmed that total eclipses are more-than-planetary events, which means that their motions are not only about orbits; they are also human and non-human entanglements (and atmospheres) of coinciding heterogeneous movements, where matter is mobilized not only by gravity but also by science, beliefs, magic, knowledge, ignorance, affects, tourism, profit and so on.

**I saw the camera shaking,**



## II

We were told that there were rattlesnakes in the mountain, and that we had to be careful. I thought about the disorientation that an eclipse might cause in them, but more importantly, of the impact of hundreds of people coming to their habitat. We did not see or hear any snakes. I think they were hidden, and terrified.

A close-up, low-angle shot looking out from a dark, irregular hole. A person's hand is visible on the right side, holding a camera that is pointed towards a bright, overexposed sky. The foreground is dark and textured, suggesting the interior of the hole or a rocky surface. The lighting is very bright, creating a strong contrast between the dark interior and the bright exterior.

<https://vimeo.com/641071657/6727ea7e3c>

I came up with the idea of putting a camera inside a hole aiming at the sky as if a snake was looking out to witness the eclipse, but later, back in my studio, I did not find the video interesting. I realized that it was because I was aiming to produce an illusion or a representation that presupposed things I do not know about snakes, like the way they see or move. By representing, we create distance. That is what representations do, explains Haraway (1997). In opposition, it would have been quite different to strap a camera to a snake, if one could only bypass the danger and the ethical implications of doing that.

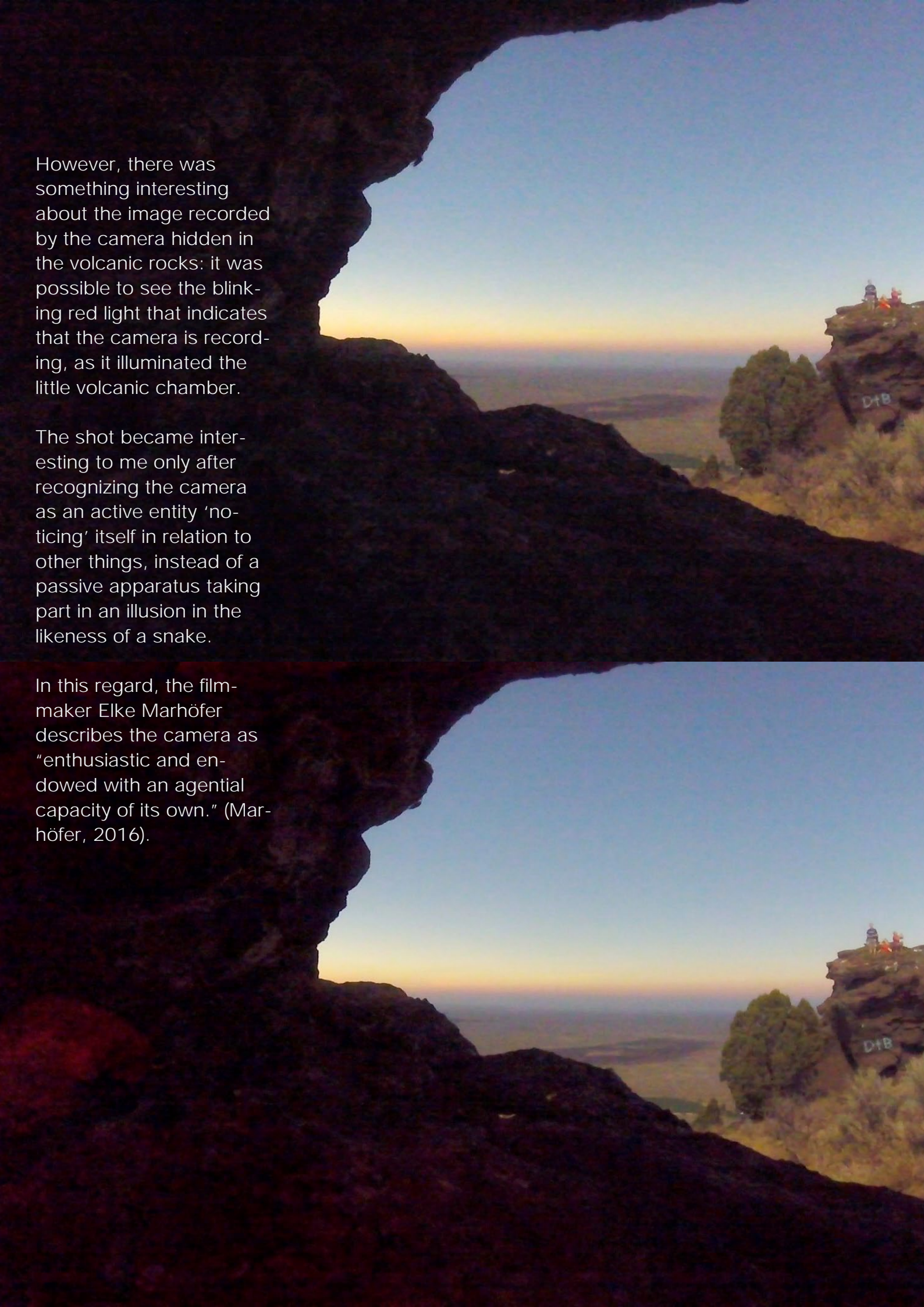
In the context of more-than-human geographies and moving images, Jamie Lorimer (2010) invites us to turn away from representations that objectify by illustrating behaviours or depicting things from afar. Instead, he looks at the potential of moving images to focus on evoking interactions, encounters and affective entanglements.

era inside a hole

However, there was something interesting about the image recorded by the camera hidden in the volcanic rocks: it was possible to see the blinking red light that indicates that the camera is recording, as it illuminated the little volcanic chamber.

The shot became interesting to me only after recognizing the camera as an active entity 'noticing' itself in relation to other things, instead of a passive apparatus taking part in an illusion in the likeness of a snake.

In this regard, the filmmaker Elke Marhöfer describes the camera as "enthusiastic and endowed with an agential capacity of its own." (Marhöfer, 2016).



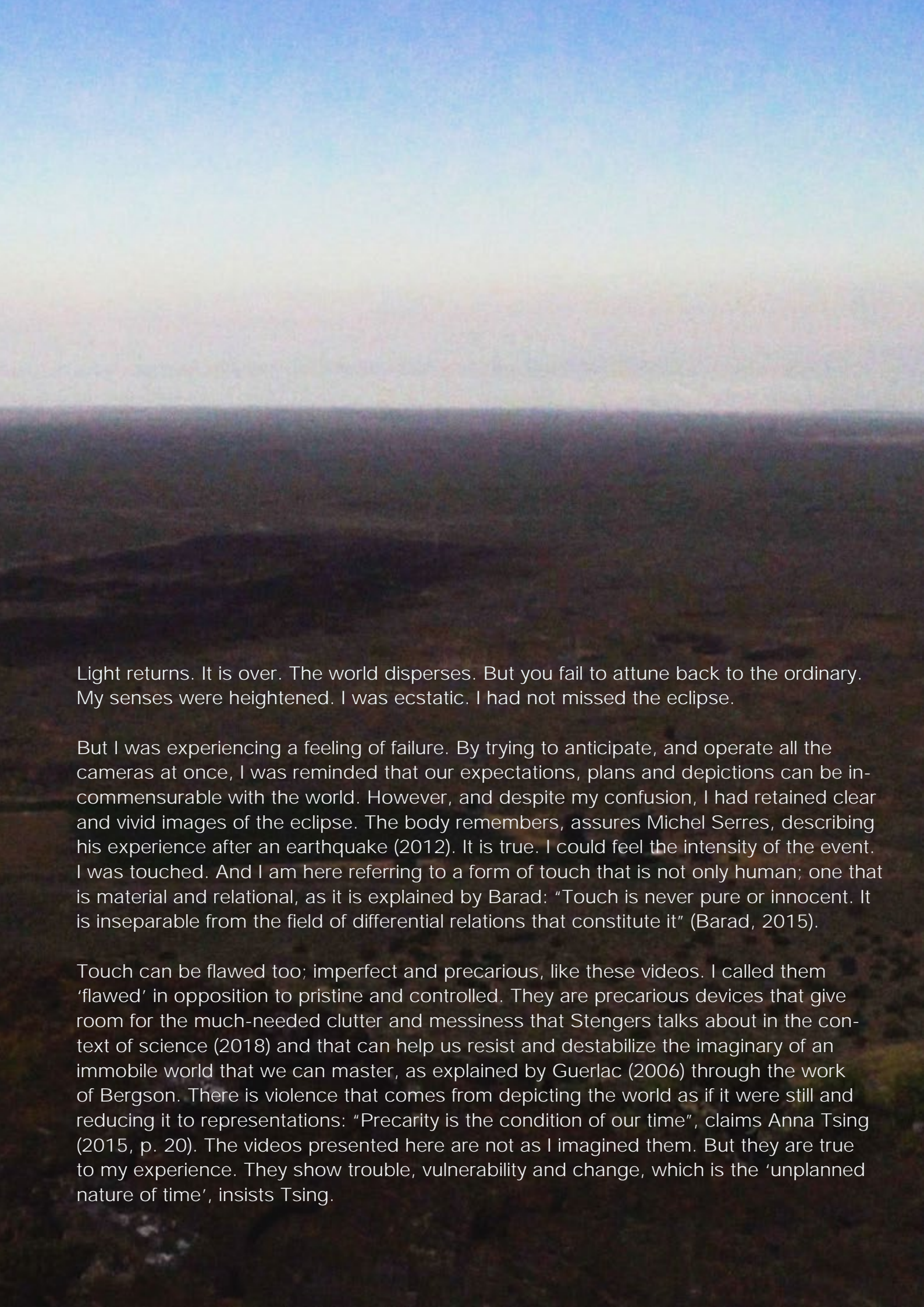
### III

I knew the exact duration of the total eclipse, which amounted to 2:18 minutes. But Henri Bergson sees time as a force, not as a reference of time that can be understood, compared, and discretely separated: whereas we can “map out the successive positions of the trajectory — the mobility itself is felt as intensity” (Guerlac, 2006, p. 68), referencing the example of the shooting star accounted by Bergson (1910)).

<https://vimeo.com/641072736/c653a1e596>

*"Think of what you experience on suddenly perceiving a shooting star: in this extremely rapid motion there is a natural and instinctive separation between the space traversed, which appears to you under the form of a line of fire, and the absolutely indivisible sensation of motion or mobility" (Bergson, 1910, p. 65)*

I believe that is also the case with the eclipse. For Bergson time cannot be discretely separated, and needs to be experienced, and not measured in minutes, seconds, or hours (Bergson, 1911). Bergson argues that representations convey no movement. However "through the collision of affective images", explains Amy Herzog (2000, p. 7), it is possible to look past the perception of movement (the things that move inside the frame) and experience what emerges from movement.



Light returns. It is over. The world disperses. But you fail to attune back to the ordinary. My senses were heightened. I was ecstatic. I had not missed the eclipse.

But I was experiencing a feeling of failure. By trying to anticipate, and operate all the cameras at once, I was reminded that our expectations, plans and depictions can be incommensurable with the world. However, and despite my confusion, I had retained clear and vivid images of the eclipse. The body remembers, assures Michel Serres, describing his experience after an earthquake (2012). It is true. I could feel the intensity of the event. I was touched. And I am here referring to a form of touch that is not only human; one that is material and relational, as it is explained by Barad: "Touch is never pure or innocent. It is inseparable from the field of differential relations that constitute it" (Barad, 2015).

Touch can be flawed too; imperfect and precarious, like these videos. I called them 'flawed' in opposition to pristine and controlled. They are precarious devices that give room for the much-needed clutter and messiness that Stengers talks about in the context of science (2018) and that can help us resist and destabilize the imaginary of an immobile world that we can master, as explained by Guerlac (2006) through the work of Bergson. There is violence that comes from depicting the world as if it were still and reducing it to representations: "Precarity is the condition of our time", claims Anna Tsing (2015, p. 20). The videos presented here are not as I imagined them. But they are true to my experience. They show trouble, vulnerability and change, which is the 'unplanned nature of time', insists Tsing.



## References

- Barad, K. (2007) *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Durham, NC: Duke University Press.
- Barad, K. (2015) *On Touching – The Inhuman that Therefore I Am* (v.1.1), *Power of Material/Politics of Materiality*. Diaphanes. Available at: <https://www.diaphanes.net/titel/on-touching-the-inhuman-that-therefore-i-am-v1-1-3075>
- Bennett, J. (2010) *Vibrant Matter*. Durham, NC: Duke University Press.
- Bergson, H. (1910) 'An Essay on the Immediate Data of Consciousness', in *Time and Free Will*. London: George Allen and Unwin, pp. 75–139.
- Bergson, H. (1911) *Creative Evolution*. New York, NY: Henry Holt and Company.
- Guerlac, S. (2006) *Thinking in Time: An Introduction to Henri Bergson*. Ithaca, NY: Cornell University Press.
- Haraway, D. (1997) *Modest\_Witness@Second\_Millennium*. New York, NY: Routledge.
- Herzog, A. (2000) 'Images of Thought and Acts of Creation', *InVisible Culture - an Electronic Journal for Visual Studies*, pp. 1–19.
- Lorimer, J. (2010) 'Moving image methodologies for more-than-human geographies', *Cultural Geographies*, 17(2), pp. 237–258. doi: 10.1177/1474474010363853.
- Marhöfer, E. (2016) 'Ten Questions : Elke Marhöfer. Interviewed by Martin Grennberger', *Kunstkritikk Online*. Available at: <https://kunstkritikk.com/ten-questions-elke-marhofer/>.
- Serres, M. (2012) *Biogea*. Randolph B. Minneapolis, MN: Univocal.
- Stengers, I. (2018) *Another Science is Possible: A Manifesto for Slow Science*. Cambridge, UK: Polity Press.
- Stewart, K. (2011) 'Atmospheric attunements', *Environment and Planning D: Society and Space*, 29(3), pp. 445–453. doi: 10.1068/d9109.
- Tsing, A. L. (2015) *The Mushroom at the End of the World. On the possibility of life in Capitalist Ruins*. Princeton University Press.

## Biography

Emilio Chapela

b. 1978 Mexico City

Chapela is a PhD candidate at the University of Plymouth, a visual artist and researcher with a background in science, sculpture and moving images. His work explores connections between science, technology and ecology through the art practice by examining notions of time and space as manifested through forces such as rivers, astronomical phenomena, light, gravity, rocks, plants, volcanoes. He has had several museum and gallery exhibitions in Mexico, USA and Europe. The most recent being at Laboratorio Arte Alameda in Mexico City in 2019, where he collaborated with architects, astronomers and scientists. He currently collaborates as senior research assistant at the University of Essex in the project [entre-rios.net](http://entre-rios.net), an online community coordinated through the arts dedicated to the wellbeing of bodies of water.



Laura Magnusson, *Blue*, 2019, video, 12 mins. Cinematography by Liquid Motion Film.

## **Trauma, Embodiment, Water: A Story about the Making of *Blue***

Laura Magnusson

“Blue” (2019) by Laura Magnusson is a 12-minute silent film shot entirely underwater, 70 feet beneath the surface of Cozumel, Mexico. It has been exhibited as a gallery installation and screened at film festivals. Cinematography by Liquid Motion Film. Production assistance by Pelagic Ventures Scuba.

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I would like to tell you a story.

Alone on an ocean “tundra,” wearing a protective clamshell-like parka and winter boots, I arduously move, exhale, and burrow through the afterlife of sexual violence. The medium of water, with its destructive potential and capacity to heal, in addition to the weight of an air tank, with its promise of survival and threat of impending emptiness, hold the fullness of traumatic experience. In this silent, psychic landscape, I bear witness to the complex nature of trauma and the ongoing process of healing.

Trauma silences. It cuts us off from the world.

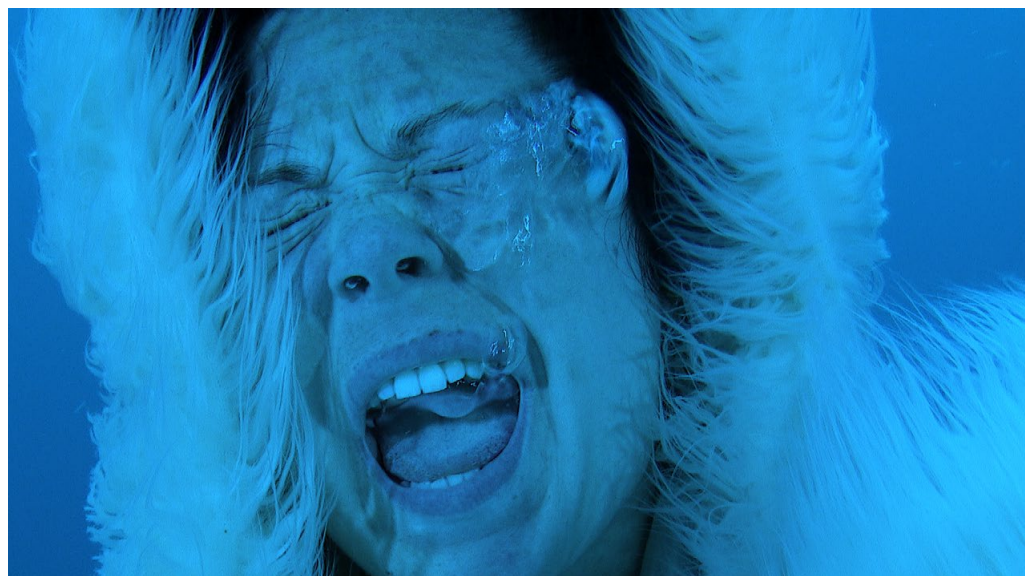


Above and Below: Laura Magnusson, *Blue*, 2019, video, 12 mins. Cinematography by Liquid Motion Film.

Living with trauma can become bearable when survivors can share their experiences and have them be witnessed. Psychiatrist Judith Herman asserts that “sharing the traumatic experience with others is a precondition for the restitution of a sense of a meaningful world.”<sup>1</sup> Yet trauma is difficult to express. According to psychiatrist Bessel van der Kolk:

Even years later traumatized people often have enormous difficulty telling other people what happened to them. Their bodies re-experience terror, rage, and helplessness, as well as the impulse to fight or flee, but these feelings are almost impossible to articulate. Trauma by nature drives us to the edge of comprehension, cutting us off from language based on common experience or an imaginable past.<sup>2</sup>

Furthermore, customary avenues for giving testimony, such as issuing a police statement or testifying in court, often present barriers that make it difficult for many survivors to fully articulate their experiences on and in their own terms.



1 Judith Herman, *Trauma and Recovery: The Aftermath of Violence— From Domestic Abuse to Political Terror* (New York: Basic Books, 2015), 70.  
 2 Bessel van der Kolk, *The Body Keeps the Score: Brain, Mind and Body in the Healing of Trauma* (New York: Penguin Books, 2015), 43.

Art can elucidate felt experiences of trauma in visual, embodied ways that are not possible through spoken and written language alone. I am interested in how artists make use of their own bodies, or embodiment more broadly, to make visible internal, often invisible, lived realities of violence and survival. How can artistic interventions expand our collective understanding of the impacts of sexual violence and trauma on survivors? Traumatic experience reconfigures relationships between self and world, opening up new perspectives, yielding new knowledge. How does it change us? What does it teach us?

I come to these questions from my own experience of trauma resulting from sexual violence. In the weeks, months, years following, I became immobilized by a despair that cannot be translated into words. It pervaded all dimensions of my life. My world became an endless, timeless expanse over which I wandered alone. Today, all these years later, I am still transported to this site, where, at times, I traverse what feels like the bottom of the ocean.



Laura Magnusson, *Blue*, 2019, video, 12 mins. Cinematography by Liquid Motion Film.

There is an assumption that justice will follow violence, and that in turn, recovery will follow justice, as though justice is a given and recovery a discernible thing with a discrete form and definitive endpoint. This has not been true for me. I have not seen justice served. Healing has been a fluid and ongoing project.

*Blue* is the impact statement that I was not permitted to give before the law. By means of somatic expression, visual metaphor, and editing strategies, it seeks to give form to my subjective experience: psychological and emotional impacts, and how they are registered in my body.



Laura Magnusson, *Blue*, 2019, video, 12 mins. Cinematography by Liquid Motion Film.

Water is my collaborator. A nurturing and threatening force, supportive, receptive, restrictive, indifferent—a continuation of myself, psychologically and materially. Water as a medium through which traumatic memories may be worked through and emotional truths conveyed.

The violence perpetrated against me occurred near water. I was wearing golden clamshell earrings. The stranger ripped out the left valve. Several hours later, the police took the remaining one. The violence left me exposed, vulnerable, not unlike a shapeless mass of wet meat scraped from a shell.

Afterward, I began to see shells everywhere. They would surface in embossed patterns on napkins. They would show up as small soaps in hotel washrooms. I would find them on coffee mugs, in conversations, and at the side of the road, far from water. At first, they seemed like siren song, luring me toward some bad place. With time, however, as I searched for meaning in senseless circumstances, they became amulets, guides.

I followed the shells and was led to Hafrún, who has become a kind of kin with whom to think through violence in its many, interconnected forms, as well as the limits of forensic, evidentiary pursuits of knowledge.



Hafrún's valves. Bangor University.

This is Hafrún.

Or, rather, these are Hafrún's valves.

She died in 2006 after being dredged from the coast of North Iceland. Scraped from the seabed, 262 feet beneath the surface, pulled up through water, and into stark light. Hafrún – mystery of the ocean—the scientists named her. *Arctica islandica* clams, which fit snugly in the palm of a hand, are of interest to scientists as recorders of past climates. Information pertaining to environmental conditions is preserved in the growth rings of their shells. Back at the laboratory, to harness the data embedded in her body, Hafrún was dissected. First, they removed her soft tissue. Then, they unhinged her valves, encased them in clear blocks of resin, and sliced them into thin sections for observation under a microscope. Growth ring analysis revealed that at the time of her death, Hafrún was 507 years old.<sup>3</sup>

What do we know of this near-mythic creature, archived as WG061294R? The specimen label featured in this photograph offers a thin contour of the circumstances surrounding her death. Part of a latitudinal coordinate. The weight of a valve. Some fields are left blank, and the label itself, about as detailed as a headstone, falls out of the frame. This data, though incomplete, tells one story. But data alone, if at all, surely cannot harness her essence. I wonder about the ineffable dimensions of her sprawling life. How might we have come to know Hafrún differently, relationally? *With* her, rather than *from* her?

In Hafrún, I find a connection to the Icelandic women who, between 1618 and 1749, were executed by the national governing body at Thingvellir for convictions of adultery.<sup>4</sup> I wonder how many of

<sup>3</sup> Paul G. Butler et al., "Variability of Marine Climate on the North Icelandic Shelf in a 1357-Year Proxy Archive Based on Growth Increments in the Bivalve *Arctica Islandica*," in *Palaeogeography, Palaeoclimatology, Palaeoecology* 373 (2013): 143.

<sup>4</sup> Már Jónsson, "How many women were drowned in Drekkingsarhylur and for what?," *Vísindavefurinn*, June 29, 2016, <http://visindavefur.is/svar.php?id=72129>.

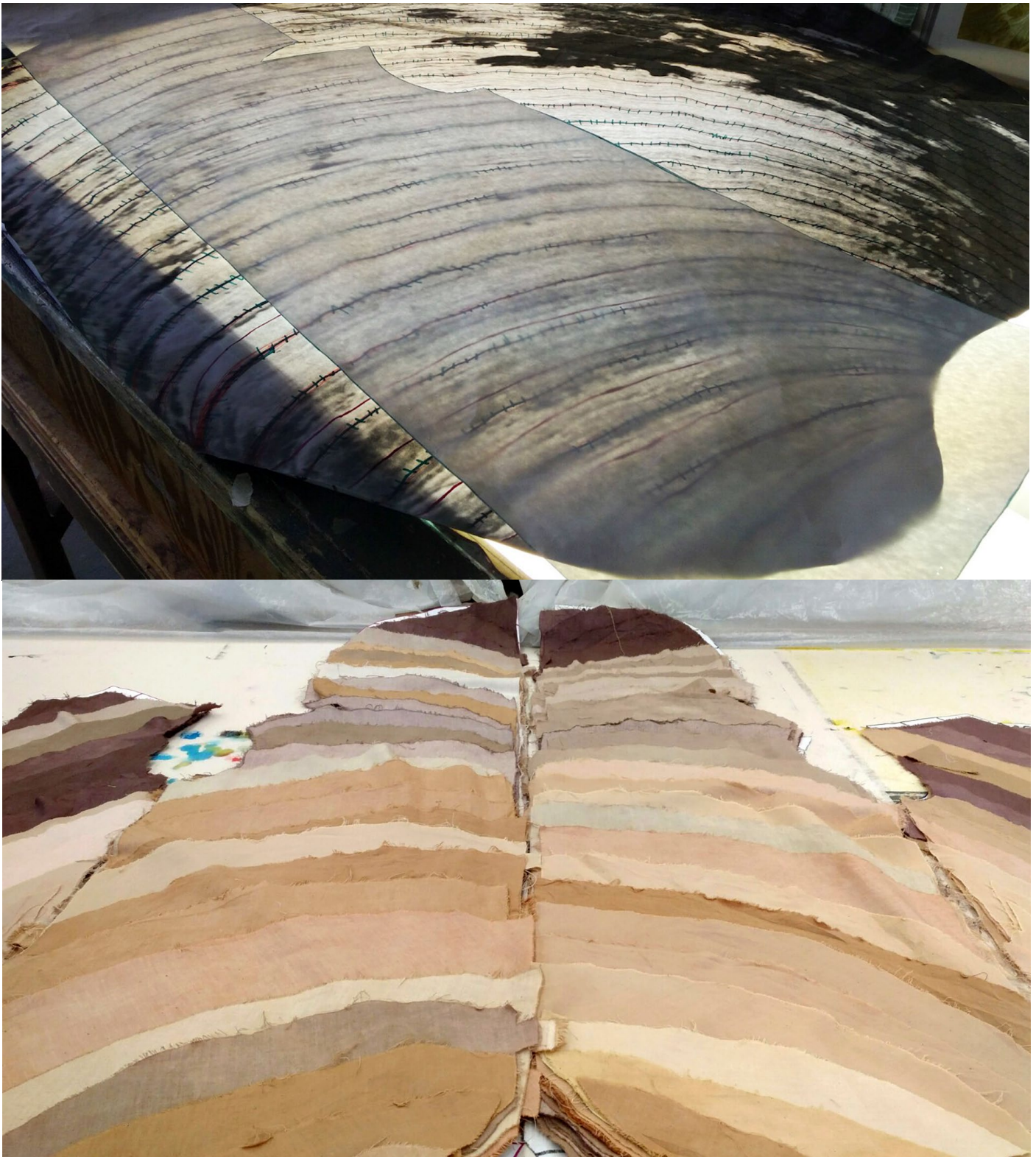
these women had been raped. They were drowned in Drekkingsarhylur, the “Drowning Pool.” I imagine them—the 18 whose murders were recorded, the countless unnamed others—resting in sediment, like clams, at the bottom of this deep, glacial pond. They have been there now for centuries.



Drekkingsarhylur circa 1900.  
Fiske Icelandic Collection, Rare & Manuscript Collections, Cornell University Library.



An information board, located near the edge of Drekkingsarhylur illustrates the execution process.



Fabrication of clamshell-like parka.

The clamshell-like parka that I wear in *Blue* is designed after Hafrún. The growth rings of Hafrún's valves determined its pattern. It is made from over 200 pieces of fabric, layered on top of one another, suggesting the secretion of shell, the accretion of growth rings.

The shell is a protective entity, encasing the vulnerable parts of the clam. My parka, too, serves to protect my body, which is otherwise exposed. In combination with the winter boots, the parka recalls colder climates.

The violence perpetrated against me occurred in a remote northern community—Churchill, Manitoba, Canada—located at the juncture of tundra and marine biomes. Of all places, it happened at the Iceberg Inn. A 1/24 scale replica of this building, sculpted from personal documentation, appears throughout *Blue*. As I hold this replica in my arms, or engage with the 3D printed figurine of myself, fixed in the doorway, the Iceberg Inn becomes a kind of dollhouse. The enormity of this site, and all that it represents, can almost be grasped. From this vantage, I am better positioned to attend to my former self, who remains trapped in the doorway—between inside and outside, then and now, there and here. In one scene, I pry my double from the doorframe and cup her in my hands.



Laura Magnusson, *Blue*, 2019, video, 12 mins. Cinematography by Liquid Motion Film.

The ocean of *Blue* is inspired by the frigid, otherworldly depths of northern waters. The waters surrounding the site of my sexual assault. The Drowning Pool. Hafrún's habitat. For this reason, part of my research-creation process involved returning to Churchill—to confront this place in all its complexity, to experience it anew—as well as visiting Iceland for the first time.

In Churchill, I wandered the town and surrounding areas, revisiting sites associated with my trauma. I recorded this journey through photos, videos, and writing. I came to understand the act of wandering as a metaphor for the ongoing and circuitous experience of healing.



The Iceberg Inn in Churchill, Manitoba (2015).

In Iceland, I obtained my drysuit certification and visited the ocean bottom off the coast of North Iceland, where Hafrún had remained burrowed for half a millennium. I dived in a glacial pond 450 metres from the Drowning Pool.



Vantage of the author while scuba diving at Silfra, located roughly 450 metres from Drekkingsarhylur (2017).

I might have shot *Blue* in Iceland, but for a number of logistical reasons, including cold temperatures, poor visibility, and cost, underwater video production was not feasible. Instead, I opted to bring form to *Blue* in the waters surrounding Cozumel, Mexico. I have a community here. It is where I learned how to scuba dive in the early days of my healing. My friends at Pelagic Venture Scuba and Liquid Motion Film, who I trusted and felt safe with, were willing to support *Blue's* production.



Fernando from Pelagic Ventures Scuba prepares for a shore dive to test film materials and equipment in Cozumel, Mexico (2018).



Guy from Liquid Motion Film and the author prepare for an underwater shoot off the coast of Cozumel, Mexico (2018).

Underwater, while shooting the film, my somatic expression was not predetermined. I did not make and execute a shot list. Rather, possibilities for movement, actions, and gestures were explored and developed on site, guided by my body in collaboration with water. Over time, motifs developed, such as digging, resting, and wandering, which, in some cases, were then refined. It wasn't until the post-production editing process—spending time with the material, relating particular clips to one another, experimenting with ordering—that I sequenced *Blue*.

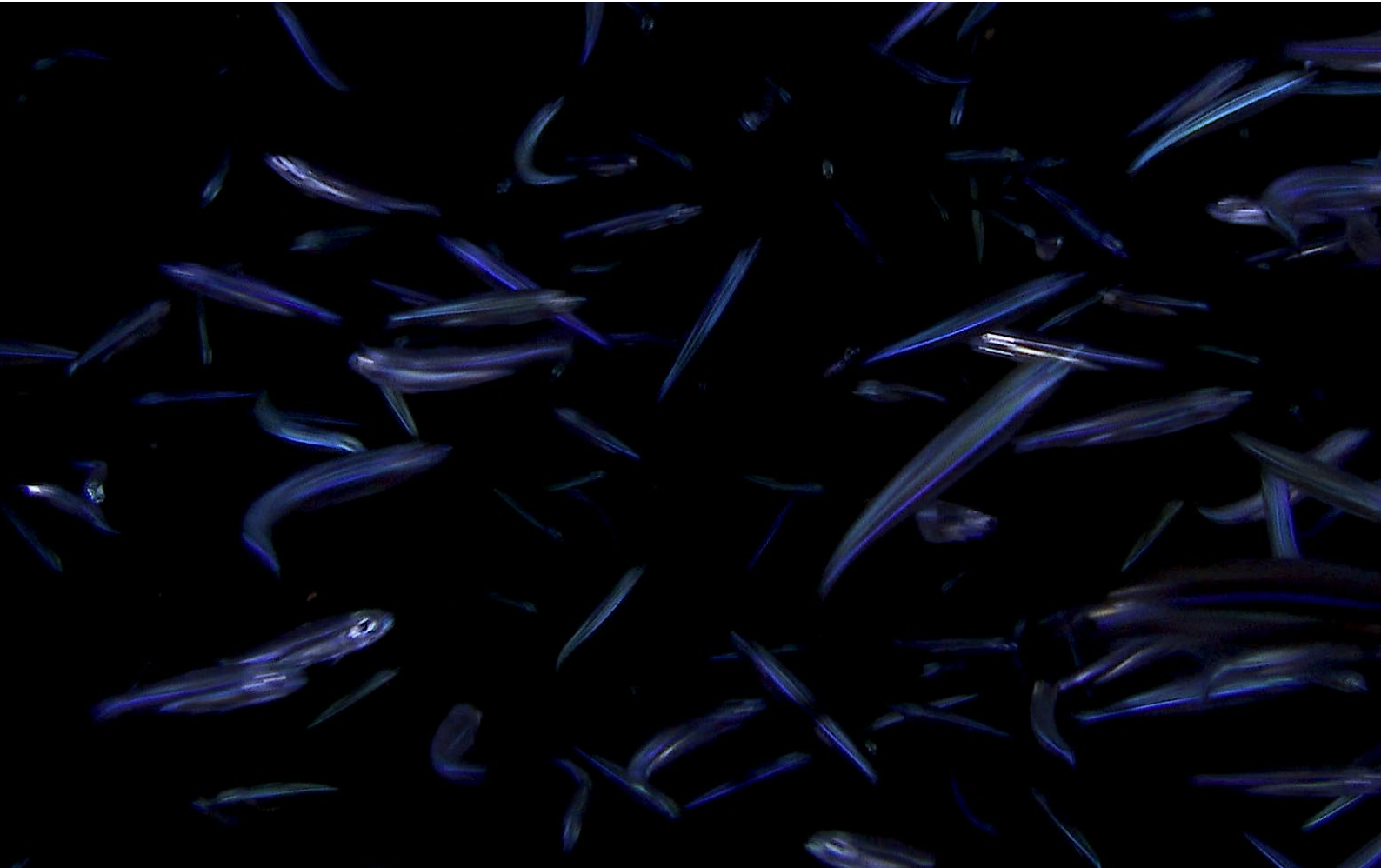
While the final work suggests that I am alone on the seafloor—appearing isolated and vulnerable at times, self-sufficient and strong at others—in actuality, I was always underwater with two other people, who supported and witnessed my testimony: divemaster Fernando and underwater cinematographer Guy. What were the dynamics of this co-production of witnessing? In the context of testimony pertaining to sexual violence—a crime that is largely perpetrated by men against women and involves asymmetrical power dynamics—what were the effects, if any, of having two men frame and supervise the telling of my story, especially given my vulnerable position on the seafloor, where I was often nearly nude? Did my awareness of being closely watched and recorded inhibit my expression? Perhaps. I was certainly mindful of these questions throughout the shooting process. At the same time, I was also aware that without Guy and Fernando's generous support and commitment to seeing my vision realized, my testimony could not have been expressed at such depths at all. That I felt safe with and respected by my team contributed to an overall positive experience of giving testimony, which ultimately serves to counter the many revictimizations that I had previously experienced in court, testifying before the law.



Underwater production of *Blue* (2018).

Underwater production raised a number of challenges. In *Blue*, I do not wear goggles, which means that during production I was not able to see. My lack of vision, in addition to my inability to speak or hear underwater, made communication difficult. In order to carry out production on the seafloor in a safe, efficient manner, we had to develop non-verbal communication strategies and map out plans above water.

On the bottom of the ocean, without my voice, hearing, or sight, I seemed to lose sense of my place in the world. With little understanding of my orientation, I noticed myself retreating inward, inhabiting my body with increased awareness. This is interesting to me given trauma survivors can often feel disconnected from their bodies.<sup>5</sup>



Laura Magnusson, *Blue*, 2019, video, 12 mins. Cinematography by Liquid Motion Film.

The making of *Blue* did serve a cathartic function. It opened up space for me to share my experiences of trauma in visual, embodied ways, and in turn, to have my story—as I wished to tell it—be witnessed. That said, it is important to note that *Blue* does not end with me rising from the depths. Rather, I remain on the seafloor. My visual testimony neither depicts the violence of the traumatic event nor the glory of a “full recovery,” as though such a thing is even possible. Rather, what I attest to in *Blue* are the quieter, more private dimensions of trauma, which may persist across a person’s entire lifetime. In presenting this non-going-away-ness of trauma, perhaps others might see themselves reflected in my experience.

## Bibliography

- Butler, Paul G., Alan D. Wanamaker, James D. Scourse, Christopher A. Richardson, and David J. Reynolds. "Variability of Marine Climate on the North Icelandic Shelf in a 1357-Year Proxy Archive Based on Growth Increments in the Bivalve *Arctica Islandica*." *Palaeogeography, Palaeoclimatology, Palaeoecology* 373 (2013): 141–51.
- Herman, Judith Lewis. *Trauma and Recovery: The Aftermath of Violence—From Domestic Abuse to Political Terror*. New York: Basic Books, 2015.
- Jónsson, Már. "How many women were drowned in Drekkingsarhylur and for what?" *Vísindavefurinn*, June 29, 2016. Retrieved May 1, 2019. <http://visindavefur.is/svar.php?id=72129>.
- van der Kolk, Bessel. *The Body Keeps the Score: Brain, Mind and Body in the Healing of Trauma*. New York: Penguin Books, 2015.

## Biography

Laura Magnusson is a Canadian artist and filmmaker, with a focus on video, sculpture, performance, and underwater research-creation. She is currently pursuing a PhD in Interdisciplinary Humanities at Concordia University in Tio'tia:ke/Montreal, Quebec, researching the capacity of multimodal artforms to elucidate felt experiences of trauma resulting from sexual violence. She holds an MFA in Interdisciplinary Art from Penny W. Stamps School of Art & Design at the University of Michigan (2019), and a BFA from The School of Art at the University of Manitoba (2010), where she has a permanent public sculpture on display.

# Spiritual Sustainability: Pagan Sounds and the Impacts of Devotion on Sustainable Practices

Isaiah Green

## Introduction

Over the past several years my work with Pagan communities has consistently revolved around their understandings of nature and how they engage with it through notions of the divine. However, after meeting a Pagan musician, Maevyn Stone, who spoke about a community of Pagans she lived with who are dedicated to sustainable lifestyles, my interest grew around the role of devotion and culture in solutions to environmental degradation. After engaging in conversations about the devotion with Maevyn, I decided to film a short documentary on the relationship between Paganism, music, and sustainability for her and for those who listen to her music. This piece is a short companion work to be read alongside the documentary, and it comprises my commentary on the importance of considering how religious groups' ontological understandings of the world inherently impact the complex ways such groups think about the environment and strive for environmental justice. After a brief overview of what stake ethnomusicologists have in conversations about the environment, I conclude by commenting on the fundamental role that music plays as a tool for sustainability in physical and spiritual ways. I argue that musical practices provide a unique approach to educational and healing praxes related to sustainability, and that for many Pagans like Maevyn expressive culture helps provide the necessary conditions for environmental justice and survival to take place.

## Culture and Sustainability: An Ethnomusicological Perspective

With continuing repercussions of anthropogenic global change, the model of sustainability has arisen as a potential framework, practice, and theory for how we might address degradation caused by such change. Becoming a more popular approach through models such as the United Nations Sustainable Development Goals (SDGs), sustainability encourages us to change or adapt our ecological, social, and economic praxes into less destructive/more tenable ones (see Basiago, 1995; Purvis, Mao, & Robinson, 2018). While many scholars still debate the term itself, and its usefulness, sustainability holds the potential to address the abundance of crises of anthropogenic change in different contexts around the world (see Blythe et al., 2018; Purvis, Mao, & Robinson, 2018). However, many of these approaches and uses of sustainability focus on *how to be sustainable* and less on *why people engage in sustainability*. Considering discourses of sustainability from a cultural

perspective expands current understandings of how people think of their lives ontologically and how that shapes the way they interact with sustainability. Further, my interest lies in how we consider the crucial role that spiritual and devotional practices play in shaping ontological knowledge about nature and being with the land (Descola, 2005; Sponsel, 2012).

Ethnomusicologists have long held a vested interest in environmental concerns from a humanistic perspective, reshaping and rethinking the way scholars addressing sound discuss topics of natural disasters, climate change, waste management, multi-species interactions, etc. Within these ethnomusicological studies, this area is generally known as ecomusicology, which came to fruition more formally in recent years with multiple scholars applying the term to a diverse set of theories and methodologies. As such, Aaron Allen and Kevin Dawe (2016) have argued for a movement toward “ecomusicologies,” which recognizes the variety of scholarship that works with “music, culture, and nature.” While other scholars have problematized these three “elements” of ecomusicology, showing how all three must include some of the implications of both pluralism and flexibility (see, for example, Ochoa Gautier, 2016), this work provides a general framework for understanding sonic and musical studies within an environmental context. And while such scholars have also stated the many inadequacies of sustainability, we might also continue to think of it as a general framework for creating a “more just future.”

My project aims to show how examining sustainability from an ecomusicological approach allows us to consider this work within a broader context of environmental justice. In essence, sustainability as praxis can provide the tools for many communities to engage with environmental justice through their own cultural practices. In his work on environmentalism of the global south, Rob Nixon’s (2011) many theoretical approaches consider concepts of “slow violence.” He explains that “by slow violence [he means] a violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, and attritional violence that is typically not viewed as violence at all” (p. 2). The violence of environmental degradation is a slow violence, and the path forward must be a slow answer (Kapchan, 2016). Sustainability as praxes, when aligned with cultural practices, provides a potential slow answer, one that situates people with the tools necessary to make long-term change and justice possible.

Approaching sustainability through an ethnomusicological lens, I explore how spiritual experiences, grounded in *acoustemology* (sonic ways of knowing the world), act as an essential aspect of people’s understanding of sustainable practice (Feld, 2015). Chanting and using the voice in other ways acts as a vital aspect of Pagan ceremonies, and many Pagans believe it is a

key element in shaping their lived experience (Weston & Bennett, 2013). They believe that through these sounds they engage, protect, and change the world around them for the better (Magliocco, 2004). However, my documentary also draws heavily from Michelle Kisliuk (2019), who explores the power of ecological metaphors concerning Gaia in singing traditions as a “survival technique” in the Anthropocene. Following from Kisliuk’s thoughts on arts as survival, it’s clear that culture bearers embody techniques through cultural performance in both real and metaphorical ways that provide information and guidance on how to engage with sustainability as a form of justice and survival. My documentary explores the role of sound, and more specifically voice, as a Pagan spiritual practice that sonically shapes experience, practice, and adaptation of sustainable praxes through cultural and devotional ontologies.

### **Spiritual Ecology and Musical Healing**

In this project, I explore how sound, culture, and devotion interact with the three pillars of sustainability in Pagan practices (Allen, Titon, & Von Glahn, 2014). First, my research largely highlights how Pagans participate in environmental sustainability, such as recycling and reusing materials for ceremonies, because of their spiritual understandings of “protecting” nature. Second, this work addresses questions around the environment as an important aspect of spiritual practice and a demonstration of how sustainability fits into devotional life. Third, it considers the social aspects of sustainability in Pagan practices, as many Pagans’ beliefs combat complex social violences of patriarchy and racism. Moreover, music and chant function as a part of sustainable practice in Pagan communities through the process of healing.

My short documentary looks at how one Pagan musician, Maevyn Stone, uses music as part of her daily life and spiritual expression, and how her devotional path led her to a life based on sustainability as a framework. Maevyn lives in an intentionally sustainable community in the United States, whose several residents mostly came to the community through their Pagan or other devotional beliefs. This community engages with sustainable practices through a variety of physical ways ranging from recycling to maintaining the land and gardening. However, for Maevyn, sustainability is also about feeling a spiritual connection with nature and a healed relationship with land. This aspect of sustainability is expressed through her use of performance through harp and singing on digital platforms connecting to a broader audience beyond the community. It is through these songs that Maevyn connects her devotional practices directly with sustainability in both physical and spiritual ways. In the documentary, Maevyn performs the folk song *Sea*

*Invocation* by the river that flows through her community. This song is intended to heal the listeners' feelings of disconnection with nature, guiding them to a more ecofriendly lifestyle. As such, these performances support sustainable living through devotional practices of sonic cultural expression.

Returning to the work of Kisliuk (2019), I view these songs as songs of survival. They provide a way for the community to engage in traditional cultural practices and thereby undergo a healing process after experiencing forms of environmental violence. Maevyn's community engages with sustainability not only in physical and spiritual ways that are grounded in devotion, but also in cultural ways that allow them to explore sustainability as a "slow environmental justice" (Nixon, 2011). It is in cases such as this that we can explore important concerns regarding how communities ask *why sustainability?* rather than *how to be sustainable*.

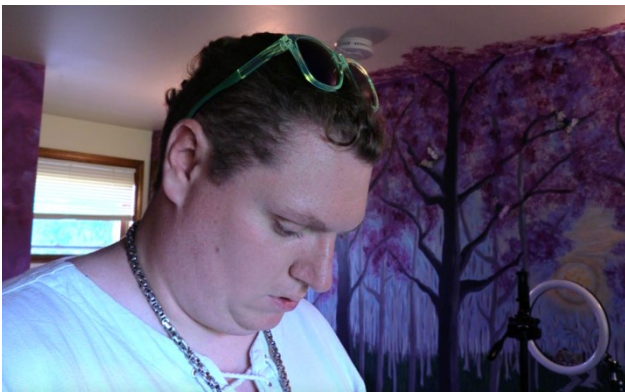


Figure 1: Setting Up

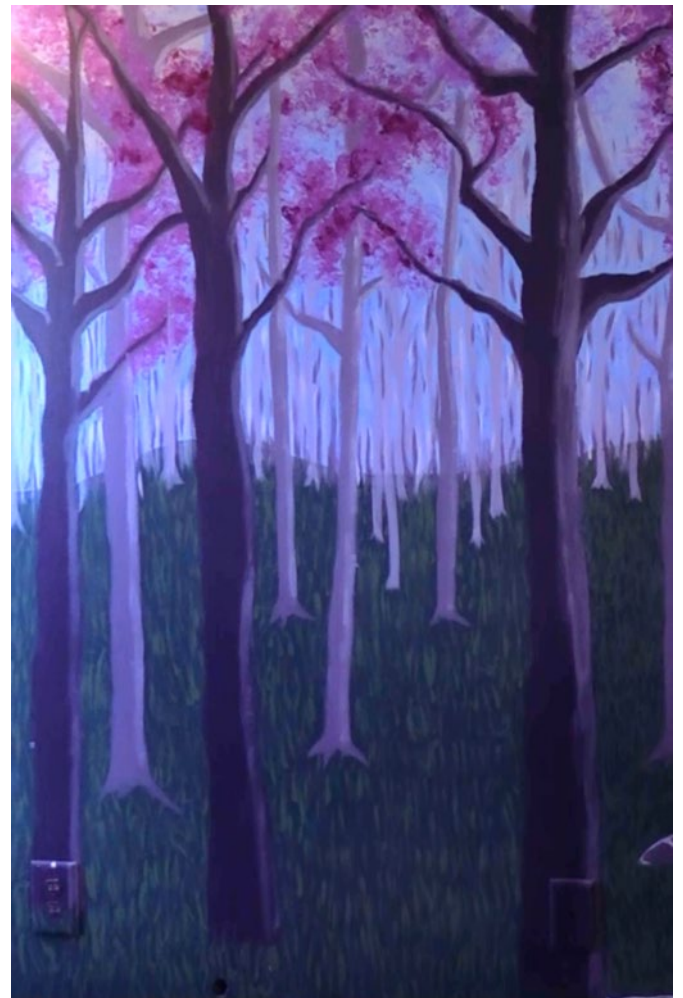


Figure 2: Maevyn's Wall



Figure 3: The Maypole



*Figure 4: Ritual Stone Circle*

*Figure 5: The Orchard*

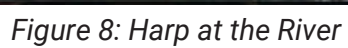




*Figure 6: Barn and Sunflower Patch*



*Figure 7: The Hall of Trees*



## Bibliography

- Allen, Aaron S., and Kevin Dawe. *Current Directions in Ecomusicology: Music, Culture, Nature*. Routledge Research in Music: 13. New York: Routledge, 2016.
- Allen, Aaron S., Titon, Jeff T. & Von Glahn, Denise. "Sustainability and Sound: Ecomusicology Inside and Outside the Academy." *Music and Politics* 8, no. 2 (2014): 1–26.
- Basiago, Andrew D. "Methods of Defining 'Sustainability'." *Sustainable Development*, 3(3) (1995): 109–19.
- Berkes, Fikret. *Sacred Ecology*. New York: Routledge, 2017.
- Blythe, Jessica et al. "The Dark Side of Transformation: Latent Risks in Contemporary Sustainability Discourse." *Antipode* 50, no. 5 (November 2018): 1206–23.
- Cadena, Marisol de la. *Earth Beings: Ecologies of Practice across Andean Worlds*. Durham: Duke University Press, 2015.
- Cooley, Timothy J. "Sustainability, Resilience, Advocacy, and Activism: Introduction." In *Cultural Sustainabilities: Music, Media, Language, Advocacy*, edited by Jeff Todd Titon and Timothy J. Cooley, xxiii–xxxiv. Urbana: University of Illinois Press, 2019.
- Cooley, Timothy J., and Jeff Todd Titon. *Cultural Sustainabilities: Music, Media, Language, Advocacy*. Urbana: University of Illinois Press, 2019.
- Costa, Neto, and Eraldo Medeiros. "Spiritual Ecology and Biocultural Heritage." *Travessias* 14, no. 1 (April 1, 2020): 14–23.
- Descola, Philippe. *Beyond Culture and Nature*. Chicago: University of Chicago Press, 2005.
- Dirksen, Rebecca. "Haiti's Drums and Trees: Facing Loss of the Sacred." *Ethnomusicology* 63, no. 1 (2019): 43–77.
- Dirksen, Rebecca. "Reconsidering Theory and Practice in Ethnomusicology: Applying, Advocating, and Engaging beyond Academia." *Ethnomusicology Review* 17 (2012) [no pagination].
- Dirksen, Rebecca. "Surviving Material Poverty by Employing Cultural Wealth: Putting Music in the Service of Community in Haiti." *Yearbook for Traditional Music* 45 (2013): 43–57.
- Federici, Silvia. *Caliban and the Witch*. Brooklyn: Autonomedia, 2004.
- Feld, Steven. "Acoustemology." In *Keywords in Sound*, edited by David Novak and Matt Sakakeeny, 12–21. Durham: Duke University Press, 2015.
- Harrington, Melissa. "Reflecting on Studying Wicca from within the Academy and the Craft: An Autobiographical Perspective." *The Pomegranate* 17, no. 1–2 (2015): 180–93.
- Jenkins, Willis, and Christopher Key Chapple. "Religion and Environment." *Annual Review of*

- Environment and Resources 36, no. 1 (2011): 441–63.
- Jensen, Gary F., and Ashley Thompson. “‘Out of the Broom Closet’: The Social Ecology of American Wicca.” *Journal for the Scientific Study of Religion* 47, no. 4 (2008): 753–66.
- Kapchan, Deborah. “Slow Activism: Listening to the Pain and Praise of Others.” *International Journal of Middle East Studies* 48, no. 1 (2016): 115–19.
- Kisliuk, Michelle. “BaAka Singing in a State of Emergency: Storytelling and Listening as Medium and Message.” In *Cultural Sustainabilities: Music, Media, Language, Advocacy*, edited by Jeff Todd Titon and Timothy J. Cooley, xxiii–xxxiv. Urbana: University of Illinois Press, 2019.
- Magliocco, Sabina. *Witching Culture: Folklore and Neo-Paganism in America*. Philadelphia, United States: University of Pennsylvania Press, 2004.
- Nixon, Rob. *Slow Violence and the Environmentalism of the Poor*. Cambridge, MA: Harvard University Press, 2011.
- Novak, David, and Matt Sakakeeny. *Keywords in Sound*. Durham: Duke University Press, 2015.
- Ochoa Gautier, Ana María. “Acoustic Multinaturalism, the Value of Nature, and the Nature of Music in Ecomusicology.” *Boundary 2* 43, no. 1 (2016): 107–41.
- Pedelty, Mark. *A Song to Save the Salish Sea: Musical Performance as Environmental Activism. Music, Nature, Place*. Indiana University Press, 2016.
- Purvis, Ben, Yong Mao, & Darren Robinson. “Three Pillars of Sustainability: In Search of Conceptual Origins.” *Sustainability Science*, 14 (2018): 681–695.
- Samuels, David W., Louise Meintjes, Ana Maria Ochoa, & Thomas Porcello. “Soundscapes: Toward a Sounded Anthropology.” *Annual Review of Anthropology*, 39 (2010): 329–45.
- Schippers, Huib, and Catherine Grant. *Sustainable Futures for Music Cultures: An Ecological Perspective*. First edition. New York: Oxford University Press, 2016.
- Soini, Katriina & Inger Birkeland. “Exploring the Scientific Discourse on Cultural Sustainability.” *Geoforum*, 51 (2014): 213–223.
- Sollee, Kristen J. *Witches, Sluts, Feminists: Conjuring the Sex Positive*. Berkeley: ThreeL Media, 2017.
- Sponsel, Leslie E. *Spiritual Ecology: A Quiet Revolution*. Santa Barbara: ABC-CLIO, 2012.
- Sponsel, Leslie E. “Spiritual Ecology: One Anthropologist’s Reflections.” *Journal for the Study of Religion, Nature and Culture* 1, no. 3 (September 2007): 340–50.
- Tomalin, Emma, Jörg Haustein, & Shabaana Kidy. “Religion and the Sustainable Development Goals.” *The Review of Faith & International Affairs* 17, no. 2 (2019): 102–18.

- Weston, Donna, and Andy Bennett. *Pop Pagans: Paganism and Popular Music. Studies in Contemporary and Historical Paganism*. Durham: Acumen, 2013.
- White, Ethan Doyle. *Wicca: History, Belief, and Community in Modern Pagan Witchcraft*. Eastbourne: Sussex Academic Press, 2015.

## **Biography**

Isaiah Green is from Waynesville, North Carolina and is a PhD student in Ethnomusicology at Indiana University where he also currently serves as a graduate assistant for the Diverse Environmentalisms Research Team (DERT). He graduated from East Tennessee State University with a Bachelor in Music with a concentration in vocal performance in 2017. He completed a Master of Music with a concentration in musicology at the University of Tennessee, Knoxville in 2019. His research focuses on musical expression in Pagan spiritual practices and their connections to the environment. He has presented on ecomusicology at the Annual Meeting of the American Musicological Society and the Music of the Sea Symposium in Mystic, Connecticut, and will present at the National Meeting of the Society of Ethnomusicology in October of 2021. He is currently conducting fieldwork with Pagan musicians and historical research on witchcraft in North America.

# WET ONTOLOGIES

Dr. Laura Denning & Dr. Deepta Sateesh

*Just as the porous temporal, material and spatial appropriations that make ground, or ecotone, where inhabitants, atmosphere, and earth, come together in ambiguous and sometimes mysterious ways, we present this chapter free of image descriptions so that readers have space to generate their own unique speculative fictions in response to the themes of the essay.*

What can the creative work of walking as methodology reveal?  
Can we experiment with ways to develop new knowledge frames?

Through this parallel collaboration, we explore the temporal, material and spatial appropriations that make *ground*; *ground*, or ecotone, where inhabitants, atmosphere, and earth, come together.

An ecotone is a geophysical term, a transition area between two biomes. A clear example of this would be an estuary, where land and water meet. We use Astrida Neimanis's poetic description of an ecotone as a lens through which to understand this term.

*As transition areas between two adjacent but different ecosystems, ecotones appear as both gradual shifts and abrupt demarcations. But more than just a marker of separation or even a marker of connection (although importantly both of these things), an ecotone is also a zone of fecundity, creativity, transformation; of becoming, assembling, multiplying; of diverging, differentiating, relinquishing. Something happens. Estuaries, tidal zones, wetlands: these are all liminal spaces where "two complex systems meet, embrace, clash, and transform one another." Eco: home. Tone: tension. We must learn to be at home in the quivering tension of the in-between. No other home is available. In-between nature and culture, in-between biology and philosophy, in-between the human and everything we ram ourselves up against, everything we desperately shield ourselves from, everything we throw ourselves into, wrecked and recklessly, watching, amazed, as our skins become thinner. (Neimanis, 2012:87)*

Our investigation explores practical forms of knowledge that enable different articulations of place, creating new possibilities for action and change-making.

Globally, we are faced with a rationality that has made it imperative for all cultures, no matter how richly distinct, to articulate their knowledges through a singular universal framing.

This imperative has had the devastating consequence of rendering cultures mute.

The challenge is to construct a domain of the practical that gives salience to the local and the particular that can invent new practices in different domains (natural, social, creative).

Implicitly or explicitly the dominant models of making have come from elsewhere (colonial inheritance in the case of education, politics and administration, but more generally universal frames in viewing social and cultural practices).

The implicit frame has had to assert itself obliquely.

Exploring two places – the Erme Estuary in SW England, and the area between the Deccan Plateau and the Arabian Sea – we believe that our experimental and parallel collaboration can reveal novel insights that foreground these implicit frames.

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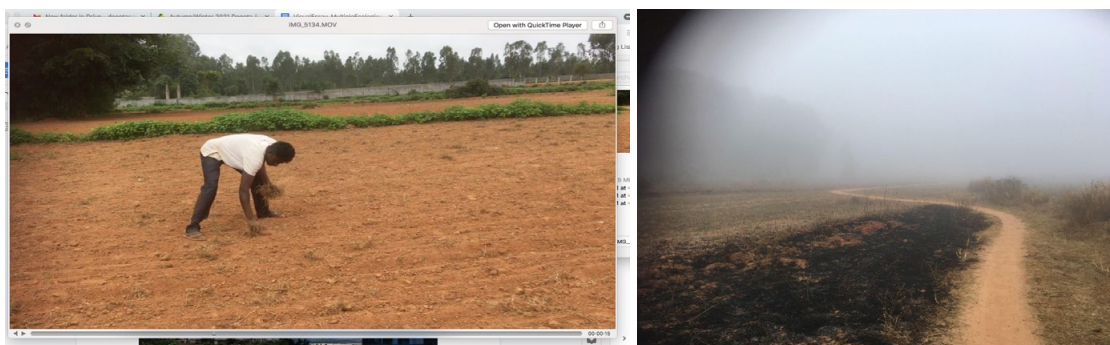
### A. Between Bangalore, Deccan Plateau, and Malpe Fishing Port, Arabian Sea

## 1: CULTIVATION



*Rainfed. Ragi (Eleusine coracana)*

19th-century colonisers valued paddy as an all-year-round crop, and marginalised *ragi* to a subsistence grain, or “poor man’s” food. *Ragi* is an ancient grain, a wet crop, grown only in the monsoon. *Ragi* is harvested between the lunar festival of Deepavali and the solar festival Sankranthi.



*Mannju – dense mist. Burning after harvest.*



*Eucalyptus*: Hugh Cleghorn and other colonial botanists cleaned up the wild entangled environment of southern India. They ordered the landscape by designing forest plantations situated at particular levels, measured by altitude, that they associated with particular climates.



[Farm resident Anand] *"This time of the year, in these three plots we grow millets ... so basically waiting for rains now. Next rain we'll see."*



*Cyclone Tauktee. Monsoon, Mausim. Malegaala.*

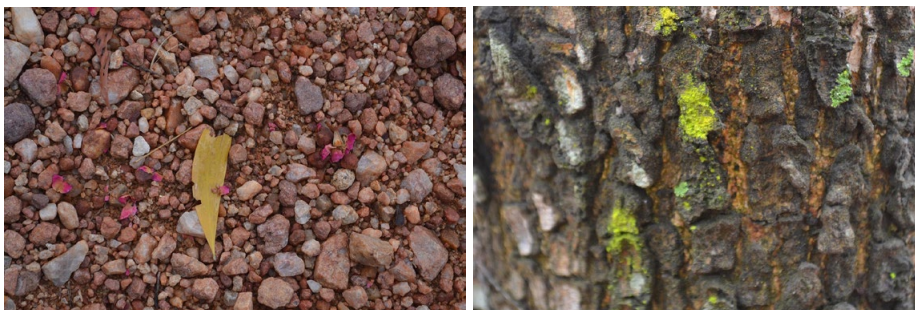
## 2: OTHER-THAN-HUMAN



*More-than-human encounters.*



*Onam festival – full moon.*





*Textures of wetness.*



*Thiragadadu, in Kannada, means roaming, wandering.*



*Walking through a milieu or ecotone, simultaneously moving and dwelling.*  
Even in this cool air, the moisture rises from the earth, warmth and wetness swirling around the feet.



*Walking through an overflow.*



*Dwelling. [Farm resident Anand] "So we have resident monkeys, peacocks, we also have mongoose and hares and porcupines."*



*Ground-nesting Red Wattled Lapwing.*

### **3: CONFLICT & CHANGE**



*Kachha. Becoming. Unfinished. Temporal.*



*Pukka. Permanent. Fixed.*

Large tracts of land were annexed, modified, and codified under conservation, with the Forest Department making profits from timber and other forest-produce. This practice, of fortress conservation towards production, continues till today where there is complete control over these areas, while practices of local communities and indigenous people are left out.



### *Reserve Forest*

The Reserve Forest is systematic monoculture. Grown for its timber, and now its oil, a eucalyptus tree guzzles about 100L of water a day. These colonial experiments failed in the Ghats as Australian eucalyptus cannot survive extreme wet grounds nor on steep slopes. Bangalore, a more arid, rocky, gently undulating terrain, is peppered with plantations, while the city and region suffer from water shortage.



*Invasive species.*



*Parthenium. Congress hullu (Parthenium hysterophorus)*

Introduced to provide green cover across “wastelands”, parthenium, or “congress grass”, has taken over abandoned or unused lands. It is infamous for its asthma-inducing pollen that fills the air during the summer rain and monsoon months.



*Lantana camara.*

Lantana forms a thick entangled wall of branches, choking the dense vegetation of the Nilgiris in the Ghats, and disturbs terrestrial movements. Although forest-dwellers use this for firewood, it is too fast-growing.



*Deep extractions. Murakal or Laterite.*



*Soaking. Seeping.*

#### 4: CHANGE, TIDES & RHYTHMS



*Southwest monsoon winds.*



*Full moon. Damp. Dark. Cold.*



*Traces.*

Walking is strolling, smelling, stepping, pausing, listening, touching, resting, attending to the non-human, familiarising even though it will change – and familiarising again, and again, over time, developing an understanding of a shifting ground.



*New moon. Nati or indigenous (gathering honey).*

*Bailu.*



The *bailu* is an open shifting ground traversed and inscribed by multiple practices, human and non-human. Here, is the moment when informal temporal movements are practiced (not bound by space), cows and goats graze, birds feed and nest, and humans walk and cycle, and water, brought by the rain, shapes and shifts the earth, sentient beings and atmosphere.



Before it arrives as a stream or river or lake, water seeps into materials, transforming them, moving through mediums of air, fire and earth. As water seeps, it defies gravity, moving through and wetting bunds, moistening rocks and oozing through and from the soft earth, into the atmosphere.



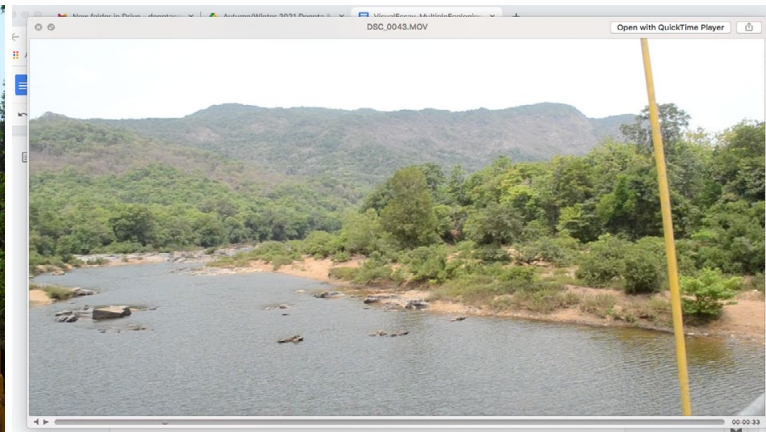
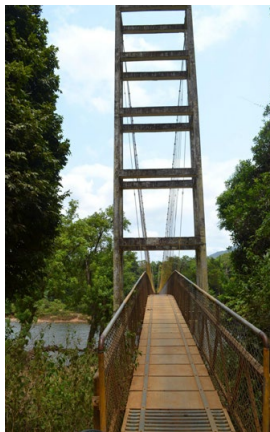
*Porous.*

## 5: MOVEMENT, MEMORY & EMBODIMENT



*Cloud bund.*

Bunds and small mounds slow water movement and hold it for a moment in a gradient of wetness allowing the temporal infrastructure to transform and become wet, while directing the seepage and holdings where water/wetness is needed for cultivation and drinking.



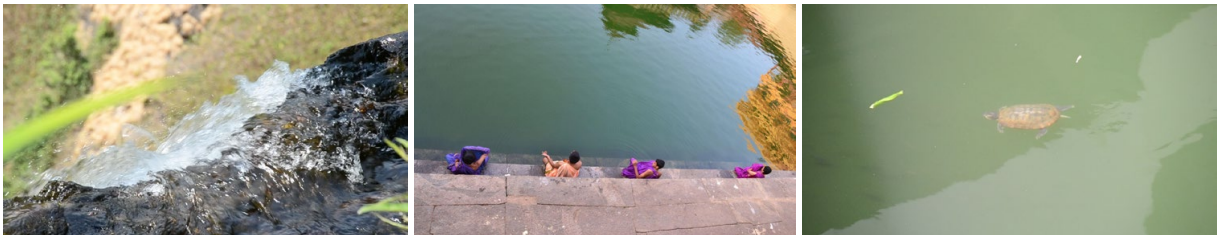
*Aghanashini Hole is the only undammed west-flowing waters in Karnataka.  
Sacred. Devara kadu.*



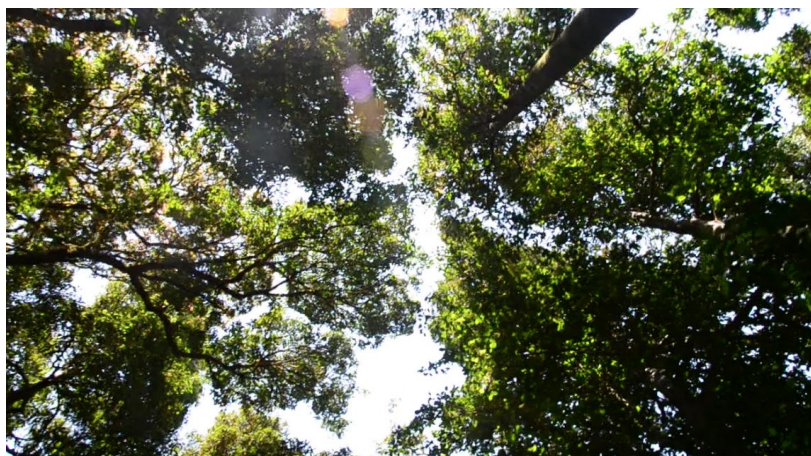
*Sacred. Naga Panchami. Dark moon.*



*Sacred. Myristica swamp.*



*Sacred. Eid. Crescent moon.*



*Sacred. Ancient kan.*



### *Traces of Gondwana.*

The Western Ghats is known as an escarpment that runs almost parallel to the west coast of India. The escarpment is said to have formed (and continues to move and change) about 80 million years ago when the Indian subcontinent/plate separated from the African/Madagascan plate. The escarpment and coast, seen as a line on a map, is evidence of this breaking away, as traces or residue of this separation.



*Here. There. Watery everywhere.*



*For days, the dense mist dances a tango with the rain ... back and forth ... breathing tiny buoyant drops ... enlivening the senses.*

## B. Erme Estuary, SW England

**Other Than Human**  
**(more than human entanglements)**  
Kelp. Wrack. Rock. Sand. Grit. Pebbles. Algae.



*Embodied accounts of walking research have demonstrated the importance of individual accounts of the lived experience of walking, an attention to a relational-social mode of moving collectively and civically, and an emplaced, haptic, and affective understanding of movement. (Springgay & Truman, 2017:4)*

Egret. Compass Jellyfish. Sea Urchins.  
Impermanence. Mortal. Temporal.



The long memories of rocks  
hold porous traces of  
becoming ecotone.

## Cultivation

Eucalypts were first introduced to Europe from material collected by Furneaux, during Captain James Cook's second voyage to Australia in 1774. During the 1870s and 1880s, the planting of eucalyptus became fashionable in Europe, especially in the Mediterranean, due to its fast growth, and the mistaken belief that the tree and extract derived from it had anti-malarial properties. Current UK thinking asserts that if woody biomass crops are to be used more widely as a source of energy in the UK, then eucalypts are likely to play an important role, due to their high productivity.



Samphire Harvesting on the Erme: The dairy farmers located here currently milk 550 jersey-cross cows at Great Orcheston. The field where the samphire is growing was used as a grazing field. In 2006 the boundary wall collapsed and it flooded tidally. The wall was beyond repair so the field was lost as a grazing one. After a year the farmers noticed samphire was growing organically. In 2008 they began to sell the samphire to Riverford. They used to pick it themselves and then sell it to Riverford but it is quite back-breaking work so now Riverford do all the picking themselves. Last year they picked 1500kg.

Samphire, like oysters, used to be a poor man's food source. Now, as a foraged food, it is fashionable and expensive.



## Conflict and Change

Conflict and change so often come hand in hand. Though the Erme Estuary may seem bucolic today, it has a rich history as a site of conflict and change.

One of the wrecks found in the estuary is thought to have been the ship carrying Philip I of Castile and Joanna of Aragon, who were rushing back to Spain to claim the throne of Castile when their fleet (a mere 300 ships) was wrecked in the area in January 1506, after being caught in a storm. Joanna's education included such varied topics as canon and civil law, genealogy and heraldry, grammar, history, languages, mathematics, philosophy, reading, spelling and writing, court etiquette, dancing, drawing, equestrian skills, good manners, music, and the needle arts of embroidery, needlepoint, and sewing. She was fluent in seven languages, and learned outdoor pursuits such as hawking and hunting. She was skilled at dancing and music, having played the clavichord, the guitar, and the monochord. Joanna was married by arrangement to Philip the Handsome, in 1496. She was declared insane and imprisoned under the orders of her father, then her husband. She remained imprisoned until her death.

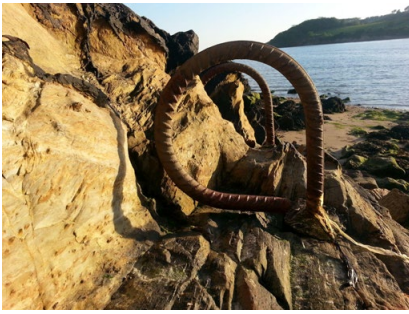


In 1940 a detachment of Indian troops were stationed at Woodleigh and there is a remembrance of these troops and their mules delivering barbed wire to Mothecombe for the coastal defences.



An oil spill incident occurred on 12 May 1990, after a collision of the trawler Diane Marie and the

tanker Rosebay. The latter, sailing from the Persian Gulf to Rotterdam, spilled 1,000 tonnes of crude oil in the open sea. Semi-hardened remnants of the spill can clearly be seen on the rocks on the estuary, and in places lichen has started to grow over it. All the way down the estuary are large metal hooks, permanently sited, that were used to tether the booms used to clear the oil spill.



Climate change, however, remains the single greatest threat to this estuary and to all humans and non-humans that live in its catchment. Humans have of course been affected, but also notably the small and very rare colonies of Six-Banded Nomad Bee and Sandpit Mining Bee that live in the sand dunes, the underwater seagrass beds in the estuary that act as nurseries for seahorses, and the critically endangered curlews who call this place home.

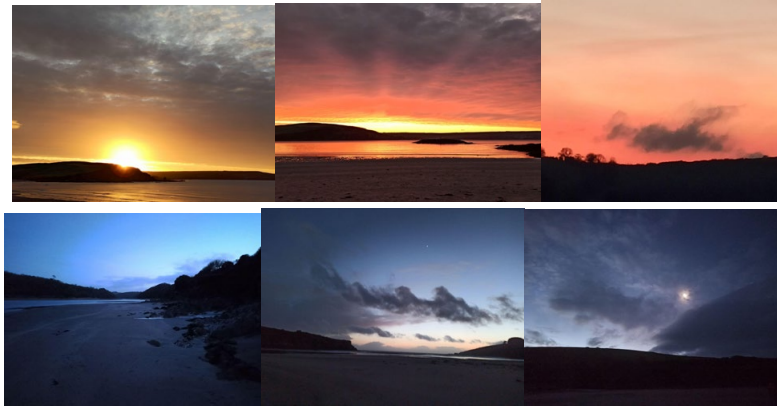


Hawkins (2012) positions place as process and place as in process, echoing Massey's conception of space as a "simultaneity of stories so far" (2005: 23).

### **Change, Tides, Rhythms**

Normally, in its orbit, the Moon passes above or below the direct line between Earth and Sun at new moon, or outside the area, obscured by the earth's shadow at full moon. As the earth rotates on its axis, the changing gravitational pull from the moon powers two giant waves flowing around the coast of Britain. When a peak of a wave passes a beach it is high tide. When a trough passes, it is low tide. It takes approximately six hours 12 and a half minutes for a trough to reach a beach after a peak has passed, and this is the time between high and low tides. While the moon has its strongest effect on daily tides, the gravitational pull from the sun, 1/3 of the power of the moon, plays an important role in monthly tides. However, this is dependent upon where the moon is in its 29.7-day orbit of earth. When the moon is aligned with the sun and earth the combined gravitational pull of the moon and sun is stronger, causing a higher tidal range with more pronounced highs and lows. These are known as spring tides and happen twice a month, just before a new moon. A week after spring, and a week before it, we have neap tides, meaning tides

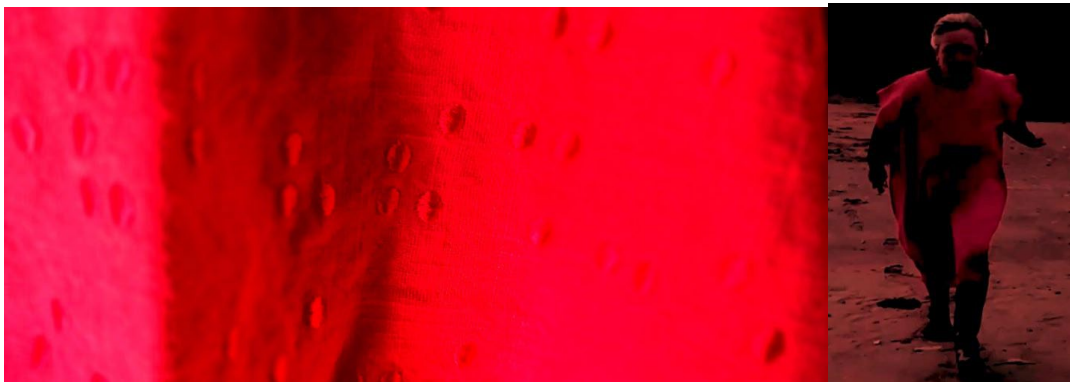
without power. These happen when the moon is perpendicular to the sun and earth, so that the combined pull is weaker. Neaps have a lower tidal range with less pronounced highs and lows.



Seasonality. Waning. Waxing. Lyrical. Crescent. Dark. Rain Star.

### **Movement, Memory, Embodiment**

*As transition areas between two adjacent but different ecosystems, ecotones appear as both gradual shifts and abrupt demarcations. But more than just a marker of separation or even a marker of connection (although importantly both of these things), an ecotone is also a zone of fecundity, creativity, transformation; of becoming, assembling, multiplying; of diverging, differentiating, relinquishing. Something happens. Estuaries, tidal zones, wetlands: these are all liminal spaces where “two complex systems meet, embrace, clash, and transform one another.” Eco: home. Tone: tension. We must learn to be at home in the quivering tension of the in-between. No other home is available. In-between nature and culture, in-between biology and philosophy, in-between the human and everything we ram ourselves up against, everything we desperately shield ourselves from, everything we throw ourselves into, wrecked and recklessly, watching, amazed, as our skins become thinner. (Neimanis, 2012:87)*



## References

- Hawkins, H. 2012 'Geography and Art. An expanding field; Site, the body and practice', *Progress in Human Geography*, 37(1), pp.52-71
- Massey, D. 2005. *For Space*. London: Sage Publications
- Neimanis, A. 2012, 'Hydrofeminism, or, On Becoming a Body of Water' in H. Gunkel, C. Nigianni, F Söderbäck (eds.), *Undutiful Daughters: Mobilizing Future Concepts, Bodies and Subjectivities in Feminist Thought and Practice*. New York: Palgrave Macmillan, pp.85-100
- Springgay & Truman, 2017; 'A Transmaterial Approach to Walking Methodologies: Embodiment, Affect, and a Sonic Art Performance', *Body & Society*, 23(4), pp.27-58

## Biographies

Deepta Sateesh is a design researcher, educator, architect and planner, working in landscapes in conflict. Her environmental practice is focused on creating new pathways in design, education and policy. Her doctoral research in the Western Ghats of India gathers situated practices, movement, and the politics of the colonial eye, and draws from design, environmental humanities and philosophy. She is also a dancer, wanderer and photographer.

She is Director and Founder of [Odde Research Center](#), and Dean of Research and Collaborations, at the [Srishti Manipal Institute of Art, Design and Technology](#), Manipal Academy of Higher Education. The research and projects of Odde Research Center are concerned with the environment and its inhabitants, oriented towards revealing and generating new possibilities and frameworks for nature-culture synchronicities. The Center's work is framed by wet ontologies, and is focused on: design of environmental policies that are inclusive, emergence of participative eco-pedagogies, and framing of responsive adaptive everyday practices. Research and practices at the Center are collaborative, gathering communities, NGOs, researchers and young learners, and government organizations.

She is Senior Advisor at the [Forum for Law, Environment, Development and Governance](#); member of [IUCN Commission on Education and Communication](#); and co-editor of the book *Product-Service-System Design for Sustainability*, a collaboration of the EU-Asialink program [Learning Network on Sustainability](#)

[\(LeNS\).](#)

Laura Denning is a transdisciplinary artist working across film, sound, social participation and installation. She has received commissions, as well as a number of awards from Arts Council England. Most of her work aims to reveal novel insights that can contest familiar ways of thinking about people, place and sensation.

She undertook her first funded film *Manual for Nomads* as writer, director and producer (working with actors, crew and post-production for the first time) in 2020. This resulted in a commission for the Arts Institute Plymouth *The Underside of Time* (2020), and a commission for *Beastly Landscapes We are all Beasts* 5 minute Artists Moving Image piece for Newcastle University's Centre for Research Excellence in Landscape (Sept 2021).

Recipient of the inaugural scholarship in Environmental Humanities at Bath Spa University, Denning has recently successfully defended her PhD thesis. This practice-led research positioned art practice within experimental geography in order to open up the registers within which art might operate, and to foreground the environmental and ecological focus of her art practice.

# **Toward Making Meat Matter: Entanglements of industrial animal-agriculture, modern design, power, and oppression**

Alexandra Kenefick

Responding to a swelling global population of 7.8 billion humans, the mega-tooled industrial animal-agricultural complex provides the archetypal high-tech solution to provisioning the world with cheap meat. However, as a vast and complicated network of meticulously designed and orchestrated services, systems, bodies, spaces, technologies, and materials built on an extractivist methodology, industrial meat's aggressively unsustainable model comes with grave expenses to the projects of global sustainability, communality, social justice, and multispecies co-existence. Design inherently plays an intimate role in the creation of such technologies and services and is therefore a key contributor to the exploitative objectives and divisive power structures that culminate the industrial agricultural complex.

In *Designs for the Pluriverse*, author Arturo Escobar argues that "Design is central to the structures of unsustainability" (Escobar, 2018, p.1) that enable such institutions as the industrial animal-agricultural complex to function. Conventional Design has pushed a modernist agenda focused on fixing 'problems' through 'progressive' and 'innovative' products and services for over a hundred years, yet Escobar asserts the modernist program—within and without the field of Design—has overstayed its welcome. From plastic bags and straws choking marine life, to discarded household batteries leeching into groundwater systems and toxic emissions from airplanes and SUVs, today's accumulation of solutionistic tools, says Escobar, "has reached thresholds ... irremediably damaging to people and the environment" (p.8). Less apparent yet equally dangerous, the insatiable zeal for material solutions has become problematic by generalizing and commodifying 'problems' with generalized and often pricey 'solutions.' Not only does such a strategy profit from transforming politics into platitudes and products, but also by generalizing the "users" expected to employ them, and by neutralizing intermediary bodies, like livestock. Illich (in Escobar, 2020, p.8) refers to this pincer movement of environmental destruction and the reduction of bodies into idealized "users" and "products" as *instrumentation*, whereby a "mega-tooled society embedded in multiple complex systems curtails people's ability to live dignified lives." Instrumentation, comments Illich, "systematically destroys convivial modes of living" (p.8) and the environment by distancing people from important political and environmental issues such as sustainability and food security (Illich in

Escobar, 2020, p.53). In effect, the pursuit of accumulating instant gratification through solutionistic technologies diminishes value in grassroots, long-term, and low-tech community engagement.

Paralleling Escobar, Tony Weis (2013) situates industrial meat production/consumption at the epicentre of environmental destruction and the global food crisis. The author describes the crisis as “a combination of recurring food price volatility, ... persistent spikes of food insecurity, malnourished communities around the world (p.65)” and uneven social fallout. Weis suggests this crisis is underpinned by an unrealistic and unsustainable methodology of livestock production that the author terms “the grain-oilseed-livestock complex” (ibid.); a viciously cyclical form of production reliant on an exhaustive amount of fossil fuels to grow grain and animals.

To paraphrase Weis (ibid.), in the interests of several mega transnational agricorporations (BS, Tyson Foods, Cargill and Smithfield (Sharma, 2018)), the rapid turnover of billions of livestock requires a sizeable and constant supply of grain and oilseed. These crops are grown in temperate regions distant from cattle production, then transported thousands of kilometres to sustain their growth and processing. Once livestock are slaughtered, their meat is transported from low population areas to parts of the globe where human populations—and demand for meat—is high (Buller and Roe, 2018; FAO, 2011 in Weis, 2013). Quantitatively speaking, the amount of natural, human, nonhuman, and financial resources needed to support this methodology is undeniably impressive, and its toll on the planet has not gone unnoticed (Eshel et al., 2014; Weis, 2020). In 2007, the world’s manufacture of roughly 293 million tonnes of meat per year, “account[ed] for nearly 80% of the entire industrial agricultural sector’s [greenhouse-gas] emissions” (McMichael et al., 2007 p.55). Roughly a decade later, global meat production reaches 340 million tonnes in a single year, equating to 16.5 percent of all anthropogenic GHG emissions, and continues to escalate (Ritchie and Roser, 2019; Twine, 2021). Concerned with the coinciding global population swell, Weis concludes that the biophysical limitations of planet Earth cannot support such a methodology any longer, which raises concerns about global food security and planetary sustainability at large.

On a more granular level, Weis (among others, such as Foer, 2010) prods at the industrial animal-agricultural complex’s impressive “illusion of efficiency,” and asks the reader to consider the ethical implications of an outwardly plentiful, sterile, and indefectible provisioning model fuelled by the exploitation of countless animals, humans, and the extraction of finite resources from territories

stolen from the communities of the global South to fund an oligopoly of wealthy transnational corporations. Arguably, through its fixed, universalist ideology, conviction in science and technology, and focus on human exceptionalism through the mass production of a “conventional” animal product, the industrial animal-agricultural complex epitomizes the modernist values of a patriarchal culture, and epitomizes an institution that acquires power through the exploitation of subverted bodies and spaces (Adams, 2015; Franklin, 1999).

Carol Adams further reifies patriarchy in the industrial animal-agricultural complex by pulling the intersecting threads of oppression through animal exploitation painfully tighter in her sobering work, *The Sexual Politics of Meat* (2015 [1990]). Adams places the exploitation of animals for consumption at the heart of patriarchal normativity, entitlement, and aggression. In particular, she highlights parallels between the semiotic and rhetorical devices used to objectify other animals as resources, with those used to identify women and people of colour as “consumable”, as “animal”, or more acutely, as “lesser beings.” These objectifying devices, woven into narratives of Western patriarchal culture, have pervasive influences on how gender, race, and other animals are represented and conceptualized within society. Consequently, through gendered advertising, the making of meat products and concepts surrounding cultural stereotypes and beyond, such norms are further metabolized by a food system that capitalizes on the transformation of animal bodies into commodities. Because of this, Adams suggests the only way we can truly begin to contemplate intersecting human oppressions is by reckoning first with the exploitation of other animals—particularly those destined to be human food.

Like Adams, for Claudia von Werlhof, the roots of the Western civilizational crisis—the destruction of communality and environment; the divisions between people, culture, nature, and environment—lie in the long development of patriarchal cultures underpinned by “practices of destruction, [and] the fragmenting of the elements of matter to eventually produce, out of isolated elements, what was considered most valuable. ... [As such,] destruction became progressively the program to be advanced, contradictorily in the name of creating life; eventually with modernity and the dominance of the machine, the program transmuted into the search for endless progress and the promise of a ceaselessly better world with monotheistic religions (and their father-figure gods) as a main component to the program” (von Werlhof in Escobar, 2018 p.10).

Adams discusses how systemic fragmentation generalizes the identities of those divided; by continually removing their subjectivity, it transforms them into metaphors, objects, resources, data, receptacles, and ultimately being-less “things” onto which the ruling class might confer status. Adams explains how this works to progressively push some communities, such as women of colour, to the margins of society, while making others, such as industrial farm animals, absent entirely. As disembodied abstractions in a patriarchal culture, we can see how subjectivities become layered and dangerously arranged: “where women [become] objectified extensions of the male ego, consequently black women [are] labelled hamburger, and white women prime rib” (Adams, 2015, p.41). With this statement, Adams demonstrates how it is other animals, reduced to being-less objects (hamburger, prime rib ...), that ultimately create the basis of oppressive narratives on to which “Others” (black women, white women ...) are layered and compared in complex yet overly simplified ways.

Abstraction and reduction reconfigure the dominant conceptualization of *who* and *what* is responsible for our meals (Buller and Roe, 2018). The systemic veiling of animal slaughter for food is a particularly salient example, both in relation to the lives of the livestock in question, and to the human lives responsible for their caring. Porcher, for example, writes extensively about the misunderstood and overlooked interdependencies of human/animal labour in meat processing; their co-constitution of shared knowledges, and also their shared sufferings (2006, 2011). By drawing both human and nonhuman labourers in meat processing to a level plane as co-workers, her investigations illuminate the sentience and personhood that demands affording to other animals. While philosopher Peter Singer (1974) is forefather to such a discourse, Wolfe extends Singer’s discussion on animal equity by noting the contingency of sentience and personhood to juridical rights and entitlements, and questions the contradiction of providing human-people rights and legal protections, yet not providing the same for other animal-people (Wolfe, 2008).

Certainly, the literal and figurative distances applied between meat and animal, and the commodification of human and nonhuman lives in meat production, expounds, as Burt (2006 p.124) illuminates,

A more general structure of exploitation and dominion. ... Once one begins to take a large-scale perspective of the networks of which [animal] slaughter is part, then the cultural attitudes to meat, ... how we assume meat is perceived, and what it means symbolically, [become] more than just abstract[ions] of the human relation to the animal kingdom. ... As

Nick Fiddes [author of *Meat: A natural symbol* (2004)] notes, “Our use of meat as food reflects our categorization of- and our relations towards animals as competitors, companions and [as] resources.”

Furthering the concept of distancing, Jonathan Safran Foer (2010, p.102) adds, “having little exposure to animals makes it much easier to push aside questions about how our actions might influence their treatment.” In regards to raising and killing of animals for food—“out of sight, out of mind”—writes Foer, “the problem posed by meat has become an abstract one: there is no individual animal, no singular look of joy or suffering, no wagging tail, and no scream.”

Particularly over the past seventy years, the topic of disconnection has found itself as a common thread among discourses questioning the rifts between culture, nature, and matter (Barry, 2009; Carson, 1962; Guattari, 2014; Latour, 2017; Naess, 1973). While there are many devices and conditions that enable division, Adams contends that dismemberment and fragmentation are empowered, in particular, by language and tools designed to claim and suppress control. Adams explains,

Language distances us further from animals by naming them as objects, as “its.” Should we call a horse, a cow, dog or cat, or any animal “it”? “It” functions for non-human animals as “he” supposedly functions for human beings, as a generic term whose meaning is deduced by context. Patriarchal language insists that the male pronoun is both generic, referring to all human beings, and specific, referring only to males. Similarly, “it” refers either to non-animate things or to animate beings whose gender identity is irrelevant or unknown. But just as the generic “he” erases female presence, the generic “it” erases the living, breathing nature of the animals and reifies their object status. The absence of a non-sexist pronoun allows us to objectify the animal world by considering all animals as “its.” (Adams, 2015. p. 46).

While language figuratively reduces animals to objects, physical tools work literally to suppress and dismember bodies in exchange for being-less parts and products. Essentially, while “the physical process of butchering an animal is recapitulated on a verbal level through words of objectification and fragmentation” (Adams, *ibid.*, p.29), together these mechanisms change the way we conceptualize other animals and other human people as they become reduced to disembodied pieces and identity markers. Removed of their wholeness and inherent complexity, they become absent referents

and trivialized toys of the dominant culture to use and consume as they choose. Recalling Illich's reference to the implosive unwieldiness of a *mega-tooled* society, and Adams' elaborations on the violent and oppressive applications of tools themselves—knives, collars, saws, syringes, grinders, tasers, rifles, and even the deceptively tame dinner forks used to pinion meat in place—positions Design and its dominant language<sup>1</sup> uncomfortably adjacent the mechanisms of oppression that seek to neutralize others.

Indeed, Design's roots in the grain of European modernism have long exalted neutrality as the purest form of its theory and practice. Jen Wang explains,

designers, as service providers, are conceived as neutral actors in the process of creating visual and experiential solutions. Designers see their work as a process and practice separate from the outcome and message it conveys. ... Although design contributes to the culture it perpetuates and reflects upon, it is seen as the stage for the message, not as part of the message itself. (Wang, 2016)

As Adams demonstrates, “neutral” Design ultimately dismembers itself and, by removing all subjectivity and social context from its practice, trivializes those bodies within and without its field to functional categories—designers, users, materials, etc. When we consider this alongside modernism's doctrine of “throwing off the spirit-stifling weight of past traditions [to] construct the ‘modern man’ as a self-determining individual untethered by historical consequences, [the ‘modern man’ has] created an unreflective [Design practice with] an arbitrary separation between [itself] and the context in which it exists and acts” (Wang, 2016 par. 10). By nullifying all antecedents, modern Design denigrates ancestral knowledges and subaltern forms of making, exchange, and preservation. It neutralizes the intersectional histories of peoples around the world.

As Wang reflects, Design is anything but neutral. Given that 93% of the Design industry's executive positions are occupied by white men (Bolt, 2020), purity, perfection, and neutrality translate to white supremacy. “Design is no more neutral than any other product of society. More than that, as an arm of Western cultural development, it is implicitly a function of neocolonialism and all that it has

<sup>1</sup> Leslie Weisman compounds the conversation on patriarchal language in the designs of architecture and space in Western culture. She discusses how members of a patriarchal culture are constrained to a dominant description of their spatial reality and built environment based on gendered conceptions of space and structure. Weisman illuminates the mutually-constitutive nature of such gendered conceptions and language, and how divisive mechanisms are deeply embedded within Western concepts of space, time, structure—and the methods we use to describe and identify them and their relationships. (Weisman, 1994)

engendered ... Ignoring the social context that informs aesthetic choices, and the political role of art and culture, exemplifies a privilege of whiteness—a privilege that enables the white person as the voice of authority” (Wang, 2016 par. 4).

As Costanza-Chock (2018a) explains, that which is considered “neutral” becomes codified into sociotechnical systems, media, and machines as “normal,” while anything deviant becomes unacceptable, unpalatable, or potentially dangerous. Consequently, deviant subjects require neutralizing through distancing and discipline until they are no longer threatening and/or may be readmitted into society (Novek, 2012). Costanza-Chock provides the example of how cisnormativity is programmed into airport body scanners, which effectively identifies transgender individuals as abnormal, and subjects them to removal from the area for further examination—more so than for those who are non-trans. Similarly, Novek (2012 p.123) reflects on how animal slaughter and meat production is “neutralized” through disciplining “controls embedded into machinery, structures, and technological processes.” Like transgender people removed from the primary airport security area, “industrial and commercial activities [are] ‘lifted out’ from their local contexts and concentrated elsewhere which ... allows morally troubling acts, such as the disciplining of livestock, to proceed relatively free of public observation.” In these examples of the efficient regimentation of docile bodies through “neutralizing” technologies, transgender people and livestock feel painfully synonymous by their similar treatment.

As we can see, paraphrasing Escobar (2018), modernity’s divisive agenda sits directly opposite projects of diversity, community, wholeness, closeness, and sustainability, in favour of human individual exceptionalism, racial essentialism, disposability, and “progress”. As a project of modernity, like industrial animal-agriculture, Design’s onto-epistemic roots in division and discontinuity are underpinned by values vindicating competition, power, and control. As a result, such institutions coproduce oppressive languages and tools within and without their structures—those that largely exclude and invalidate the perspectives of the poor, uneducated, non-whites, females, and other animals.

Félix Guattari states it is our collective “fatalistic passivity” that sits at the root of wicked problems: the overwhelming nature of the contemporary consumer landscape, the scale of ethico-political concern, and the threat of environmental collapse. While Guattari calls for awareness and action,

Latour has likewise argued that to avoid the onset of melancholia and denial such conditions often invite, it is necessary to “explore the disconnect” (Latour, 2017, p. 25). By this, he is referring to the unique conditions and relationships suspended between us and other entities, places, ideas, and materials that are made indistinct by apathy, distancing and fragmentation devices. Latour suggests that these nebulous divisions are crucial spaces of negotiation, where we might meet with unfamiliar entities or difficult situations to understand them better. In this way, recognizing them, addressing them, meditating on them, and/or working with them, proffers the opportunity for response, and an important sense of clarity and agency amid chaos. Just as Escobar (2020) reckons with the ancestral concept of *sentipensar*<sup>2</sup>, where action is intrinsic to thinking and feeling, these authors draw attention to the salience of emotion in the production of knowledge, activism, morality, and ethics; a quality willfully overwritten by modernism’s quest for neutrality.

For a society fluent with the hard edges of objectivity, divisions, and categories, it serves noting, on the topic of emotion, the discomfort and aversion that undeniably accompanies exploring and accepting uncertainty. However, as Latour suggests, by fearlessly exploring the disconnect we can begin to develop the competencies necessary to work through difference, and to remain calm and responsive when the hard edges disintegrate, when categories collide, and when our unshakable values are jarred. Hence the question becomes how to enable people to “think actively” (Deleuze in Yaneva and Zaera-Polo, 2017, p. 69); in other words, to resist ready and banal interpretations of the world, and instead intimately to explore the relationships they contend with it.

In light of the damage and oppression incurred by the industrial animal-agricultural complex, its designs, its languages, and its tools, “we need other narratives,” writes Stengers (2011, p.371), “narratives that populate our worlds and imaginations in a different way,” narratives that jointly recognize the absented histories of diminished human and nonhuman voices embroiled in matters of meat. To “explore the disconnect” —the nebulous spaces between long-established dichotomies of gender, race, species, nature and culture—requires us to “activate thinking” in order to make change, to redistribute agency, and to design new methods of multispecies flourishing. Haraway (2016), Rosner (2018), Stengers (2011), and Escobar (2018) suggest practices of worlding transitions, making-with unexpected company, and building new politico-ontological ecologies of practice that enable a pluriversally response-able and responsive, “world where many worlds fit”

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2 The living principle of the swamp and riverine communities of Colombia’s Caribbean coast (Escobar, 2020).

(Escobar, 2018, p.52). By recognizing all contributors and contributions as meaningful and valuable, by allowing “collective political agency, democratic pluralism, innovation ... inspiration, and the flight of imagination” (Diprose, 2017, pp.41–42) to take place, we might redistribute power, and reinvent how it’s used. As Haraway (2008, 92–93) suggests, such a summons invites a kind of worlding that is rich with the potential for more responsive intervention, invention, and speculation. It is likewise a summons that speaks to the spirit of Design—that is, according to Papanek (1972)—the human endeavour of problem-solving. Yet given the complexity at stake, and the oppressive history of modernity’s patriarchal institutions, it is a summons to challenge Design’s canonical framework of what problems are, what is considered Design, and who is considered a designer.

In attending to the underwritten practices and perspectives of diverse human and nonhuman bodies as important assets for important change while embracing concepts of relationality, plurality and collaboration, we can start to “understand Design as a different kind of project: one that is both activist and investigative, personal and culturally situated, responsive and responsible” (Rosner, 2018, p.11). Such an endeavour begins to recognize value as something that is made through embodied and emergent practices (Akama, 2015) by focusing less on attaining objective results or making material things, and by instead adding gravity to the processes of navigating across divisions of power and heterogeneity in search of equity and equitable futures. Essentially, by recognizing “a deep connection between action and experience, ... [and] a certain circularity in all knowledge [where] all doing is knowing, all knowing is doing, [and where] every act of knowing brings forth a world” (Escobar, 2020, p.101), endeavouring with Design in such a way invites a new agenda, and an enhanced approach to methodology that is as much ontological as it is ethical, political, and epistemological.

Costanza-Chock (2018b, p.2) writes, “Design mediates so much of our realities and has tremendous impact on our lives, yet very few of us participate in design processes. In particular, the people who are most adversely affected by design decisions—about visual culture, new technologies, the planning of our communities, or the structure of our political and economic systems—tend to have the least influence on those decisions and how they are made.” Contrarily, a “Design where everyone designs” (Escobar, 2018, p.159) permits the breaking down or blurring of dichotomies and invites equity in the emergence of becoming-with other practitioners and their practices so that we might endure the discomfort, aversion, and overwhelming trouble together. With this in mind, Haraway

(2016, p.1) cautions that in times of desperation, it can be tempting to crave destruction in order to create space for Edenic futures, but this is contradictory to life-projects, and only succumbs to the modernist paradigm. Instead, she urges us to “stay with the trouble.” Staying with the trouble means enduring the growing pains of transition, and moving toward new modes of coexisting without forsaking antecedents by designing nurturing tools and languages to confidently occupy fricative spaces and discrepancies. Like Latour, Escobar suggests such an ontological Design project “entails reconnection ... it discerns paths to greater mindfulness and enables ontologies of compassion and care” (Escobar, 2018, pp.132–133). As such, we might better “render our inevitable existential condition of being between worlds into a hopeful praxis of living, a space for contributing, [and] to stitch worlds together within a pluriversal ethics” (ibid., p. 200).

Speaking through Ayurveda and the need to establish a more integrative relationship to the wellnenses of ourselves and our communities through food, Cardona-Sanclemente (2020, p. 201) declares “the hypnosis of industrialization [has] commandeered our responses to our surroundings, work, and social life,” ushering malaise, apathy, and giving permission to unhealthy structures to colonize our realities. Challenging normative structures by asking who uses and who gets used is critical to developing equity and restoring health in a world built on entrenched divisions that generate power at the expense of harming and oppressing others. The contemporary design of industrial animal-agriculture is arguably the most pristine and pervasive example of neutralized exploitation and slavery for its unmitigated predation on natural environments, humans, and nonhumans alike. By objectifying animals as meat, humans as consumers, and environments as resources, it is a small few who benefit from its strategy, yet many (untold generations) who suffer its consequences. The human relationship to other animals, the necessity to eat, and therefore the relationship to meat, is universal (Fiddes, 2004; Pollan, 2006; Smil, 2002). This makes modern meat consumption/production *the* space to dare the making of new forms of pluriversal collaboration, learning to coexist with diversity, and to stand-with alternative ways of *seeing as* (Rosner, 2018). As Haraway (2016, p. 130) beseeches, “we must dare *to make* the relay; that is, to create, to fabulate, in order not to despair, in order to induce a transformation.”

## Works Cited

- Adams, Carol J. *The Sexual Politics of Meat: A Feminist-Vegetarian Critical Theory*. New York: Bloomsbury Academic, 2015.
- Akama, Yoko, Dagny Stuedahl, and Izak Van Zyl. "Design Disruptions for Contested, Contingent and Contradictory Changes." *Interaction Design and Architecture(s) Journal* 26 (2015): 132–148.
- Barry, Clayton. "The environment/society disconnect: An overview of a concept tetrad of environment." *The Journal of Environmental Education* 41, no. 2 (2009): 116–132.
- Bolt, Laura. "Women Make Up Over Half the Design Industry-So Why Are There So Few at the Top?" *Eye on Design*, March 30, 2020, [eyeondesign.aiga.org/women-make-up-more-than-half-of-the-design-industry-but-how-do-they-get-to-the-top/](https://eyeondesign.aiga.org/women-make-up-more-than-half-of-the-design-industry-but-how-do-they-get-to-the-top/).
- Buller, Henry, and Emma Roe. *Food and Animal Welfare*. London: Bloomsbury Academic, 2018.
- Burt, Jonathan. "Conflicts around slaughter in modernity." In *Killing Animals*, edited by The Animal Studies Group, 120–144. Urbana and Chicago: University of Illinois Press, 2006.
- Cardona-Sanclemente, Eduardo. *Ayurveda for Depression: an Integrative Approach to Restoring Balance and Reclaiming Your Health*. Berkeley: North Atlantic Books, 2020.
- Carson, Rachel. *Silent Spring*. Boston: Houghton Mifflin Harcourt, 1962.
- Costanza-Chock, Sasha. "Design Justice, A.I., and Escape from the Matrix of Domination." *Journal of Design and Science* July 16 (2018a), <https://doi.org/10.21428/96c8d426>.
- Costanza-Chock, Sasha. "Design justice: Towards an intersectional feminist framework for design theory and practice." In *Design as a catalyst for change – DRS International Conference* (2018b): 528–540. London: Design Research Society, <https://doi.org/10.21606/drs.2018.v1>.
- Diprose, Rosalyn . "Speculative Research, Temporality, and Politics." In *Speculative Research: The Lure of Possible Futures*, edited by Alex Wilkie, Martin Savransky, and Marsha Rosengarten, 57–69. Abingdon and New York: Routledge, 2017.
- Eshel, Gidon, Alon Shepon, Tamar Makov, and Ron Milo. "Land, irrigation water, greenhouse gas, and reactive nitrogen burdens of meat, eggs, and dairy production in the United States." In *Proceedings of the National Academy of Sciences of the United States of America*, 111(33) (2014): 11996-12001. Washington, DC: National Academy of Sciences, <https://doi.org/10.1073/pnas.1402183111>

- Escobar, Arturo. *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*. Durham: Duke University Press, 2018.
- Escobar, Arturo. *Pluriversal Politics: The Real and the Possible*. Durham: Duke University Press, 2020.
- Fiddes, Nick. *Meat: A Natural Symbol*. London: Routledge, 2004.
- Foer, Jonathan Safran. *Eating Animals*. London: Penguin, 2010.
- Food and Agriculture Organization (FAO). 2011b. World livestock 2011 – livestock in food security. Rome: FAO.
- Franklin, Adrian. *Animals and Modern Cultures: A Sociology of Human-Animal Relations in Modernity*. London, Thousand Oaks, New Delhi: Sage, 1999.
- Guattari, Felix. *The Three Ecologies*. London: Bloomsbury Academic, 2014.
- Haraway, Donna J. *When Species Meet*. University of Minnesota Press, Minneapolis, MN, 2008.
- Haraway, Donna J. *Staying With the Trouble: Making Kin in the Chthulucene*. Durham: Duke University Press, 2016.
- Latour, Bruno. "Waiting for Gaia. Composing the common world through arts and politics." In *What is Cosmopolitical Design? Design, Nature and the Built Environment*, edited by Albena Yaneva and Alejandro Zaera-Polo, 21–33. London: Routledge, 2017
- McMichael, Anthony J., John W. Powles, Colin D. Butler, and Ricardo Uauy. "Food, livestock production, energy, climate change, and health." *The Lancet* 370, no. 9594 (2007): 1253–1263, [https://doi.org/10.1016/S0140-6736\(07\)61256-2](https://doi.org/10.1016/S0140-6736(07)61256-2).
- Naess, Arne. "The shallow and the deep, long-range ecology movement. A summary." *Inquiry* 16, nos.1–4 (1973): 95–100, <https://doi.org/10.1080/00201747308601682>.
- Novek, Joel. "Discipline and distancing: Confined pigs in the factory farm Gulag." In *Animals and the human imagination: A companion to animal studies*, edited by Aaron Gross and Anne Vallely, 121–151. New York: Columbia University Press, 2012.
- Papanek, Victor. *Design for the real world*. London: Thames and Hudson, 1972.
- Pollan, Michael. *The omnivore's dilemma: A natural history of four meals*. New York: Penguin Press, 2006.
- Porcher, Jocelyne. "Well-being and suffering in livestock farming: living conditions at work for people and animals." *Sociologie du Travail* 48, no. 1 (2006): e56–e70, <https://doi.org/10.1016/j.soctra.2006.02.001>.
- Porcher, Jocelyne. "The relationship between workers and animals in the pork industry: A shared suffering." *Journal of Agricultural and Environmental Ethics* 24 (2011): 3–17. <https://doi.org/10.1007/s10801-010-9256-2>.

org/10./1007/s10806-010-9232-z.

Ritchie, Hannah, and Max Roser. "Meat and Dairy Production." *Our World in Data*, 2019, <https://ourworldindata.org/meat-production>.

Rosner, Daniela K. *Critical fabulations: Reworking the methods and margins of design*. Cambridge: MIT Press, 2018.

Sharma, Shefali. "Mighty Giants: Leaders of the Global Meat Complex." *Institute for Agriculture and Trade Policy*, Institute for Agriculture and Trade Policy, 10 Apr. 2018, <https://www.iatp.org/blog/leaders-global-meat-complex>.

Singer, Peter. "All animals are equal." *Philosophic Exchange* 5, no. 1 (1974): 6, <https://doi.org/10.4324/9781315262529-2>.

Smil, Vaclav. "Eating meat: evolution, patterns, and consequences." *Population and Development Review* 28, no. 4 (2002): 599–639, <https://doi.org/10.1111/j.1728-4457.2002.00599.x>.

Stengers, Isabelle. "Wondering about Materialism." In *The Speculative Turn: Continental Materialism and Realism*, edited by Levi Bryant, Nick Srnicek (Author), and Graham Harman, 368–380. Melbourne: Re-Press, 2011.

Twine, Richard. "Emissions from Animal Agriculture—16.5% Is the New Minimum Figure." *Sustainability* 13, no. 11 (2021): 6276, <https://doi.org/10.3390/su13116276>.

Wang, Jen. "Now You See It: Helvetica, Modernism and the Status Quo of Design." Accessed January 15, 2022. *Medium*, December 8, 2016, <https://medium.com/@earth.terminal/now-you-see-it-110b77fd13db>.

Weis, Tony. "Confronting meatification." In *Green Meat? Sustaining Eaters, Animals, and the Planet*, edited by Ryan M. Katz-Rosene and Sarah J. Martin, 29–42. Montreal: McGill-Queen's University Press, 2020.

Weis, Tony. "The meat of the global food crisis." *The Journal of Peasant Studies* 40, no. 1 (2013): 65–85, <https://doi.org/10.1080/03066150.2012.752357>.

Weisman, Leslie. *Discrimination by design: A feminist critique of the man-made environment*. University of Illinois Press, 1994.

Wolfe, Cary. "Flesh and finitude: Thinking animals in (post) humanist philosophy." *SubStance* 37, no. 3 (2008): 8–36, <https://doi.org/10.1353/sub.0.0015>.

Yaneva, Albena, and Alejandro Zaera-Polo, eds. *What Is Cosmopolitical Design? Design, Nature and the Built Environment*. London: Taylor & Francis, 2017.

## Biography

Alexandra Kenefick is a PhD Candidate at Concordia University, Montreal, in the independent interdisciplinary program, INDI. Her research focuses on the intersection of feminist Design and ethics in meat consumption/ production politics. With a Bachelor's degree in communication design from Emily Carr University and a Master's in the gastronomy of meat from the University of Gastronomic Sciences, her work emphasizes the materiality of meat through making and embodied experience and exposing meat's complex narratives through feminist Design. This work seeks to expose the complicated relationships humans contend with meat and meat-animals, the divisions of power present in the commoditization of meat and the consumer landscape, and ultimately questions how humans can be response-able agents of mindful eating practices as part of and as distinct from the industrial animal-agricultural complex. Through her scholarly and creative work, she hopes to spark deeper inquiry into the profound and contentious thing that is killing and eating other animals, and how the subtleties of individual response can persuade the momentum of great change.

## Flounder Lee Biography

Flounder Lee is an artist/curator and postgraduate researcher in Art & Media at the University of Plymouth, UK pursuing his PhD in art and curatorial practice. He was raised on the ancestral lands of the Yuchi, Shawnee, Muscogee/Creek, and Cherokee peoples. He received his BFA from the University of Florida and his MFA from California State University Long Beach—both in studio art and photography. He then taught full-time at universities in the US, Malaysia, and Dubai for 12+ years.

Exhibitions curated include: *The Future is...Ordinary?* at the Shangyuan Art Museum, Beijing, China; *On this night, for the first time, something will happen...* at the Jean Paul Najjar Foundation, Dubai, and *Aerospacial* at Herron School of Art and Design in Indianapolis. He founded and co-ran SpaceCamp MicroGallery, a tiny project space in Indianapolis. He has written several essays including for *Tribe: Photography and New Media in the Arab World*.

Several overlapping themes run throughout his work: decolonialism, mapping, science, the future, and environmental change. He uses various media such as photo, video, performance, sound, and installation to create work that touches on these topics.

His PhD project deals with mundane speculative futures through artistic and curatorial perspectives. He works using anti-oppressive practices—anti-racist, anti-colonial, anti-patriarchal, anti-heteronormative, anti-ableist, inclusive, and intersectional with decolonial and curatorial activism approaches.

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## Colette Campbell-Jones Biography

Colette Campbell-Jones is currently a PhD student at the University of Plymouth in Media Studies. She earned an MFA at the San Francisco Art Institute in the USA where she received a full merit-based scholarship. At graduation she received the “Ella King Tory award for Excellence and Innovation” for the overall top graduating MFA across all disciplines. She was also awarded a Graduate Fellowship (a full year MFA residency) at the prestigious Headlands Center for the Arts in Sausalito California. Afterwards, she remained connected to The Headlands as an affiliate artist. She has exhibited in the United States and The Netherlands.

In her current research she will be speculating beyond imbricated binaries and epistemologies which ground the western cultural Weltanschauung. Through the lenses of Bergson’s “Becoming/Unbecoming” and Barad’s “Intra-Action”, she will investigate equivalencies between inner human ecologies with those located in aquatic marine environments. Using a hybrid collage process, she iteratively cuts and recombines paper fragments (pieces of documentary images) on her studio wall. Next the collage is digitally morphed, mutated, and transformed inside the computer. The emergent new fictions simultaneously maintain “a purchase of the real”, as described by Roland Barthes.



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