Tvergastein bears the name of Arne Naess' cabin retreat in the mountains of Hallingskarvet. It was there that Naess, an activist and one of the most wide ranging philosophers of the last century, wrote the majority of his work. These writings, his unique ecophilosophy, and his life of activism continues to inspire environmentalists and scholars in Norway and abroad. In making this journal the cabin's namesake, we aim to similarly join academia with advocacy for the environment. We aspire to the "enormous open view at Tvergastein" and the perspective Naess found there.

Tvergastein

More Than Human

Issue 17

TVERGASTEIN
Interdisciplinary Journal of the Environment

More Than Human

17TH ISSUE
06/2023

Tvergastein

INTERDISCIPLINARY JOURNAL OF THE ENVIRONMENT

Graphic Design: Austra Apsīte

Printer: Merkur Grafisk AS

Circulation: 250

Editorial review finished: May, 2023

Date of publication: June, 2023

ISSN number (online): 1893-5605
ISSN number (print): 1893-5834

Tvergastein has two annual issues and is distributed for free at UiO, NMBU and several other locations.
A digital version can be found at our webpage : www.tvergastein.com

We would like to extend our sincere gratitude and thanks to The Center for Development and the Environment (SUM).

Address: Tvergastein, co/SUM, Postboks 1116 Blindern 0317 OSLO
E-mail: tvergastein@sum.uio.no
Web: www.tvergastein.com
Facebook: facebook.com/tvergastein
Instagram: tvergastein.journal

Call for papers for issue #18 can be found in the middle of this issue.
More information will be announced on our web page and our Facebook page

Tvergastein accepts submissions in two categories: Shorter op-ed pieces (2,000 – 5,000 characters) and longer articles (10, 000 – 20, 000 characters), in either English or Norwegian.

UNIVERSITETET I OSLO

UiO : Centre for Development and the Environment
University of Oslo

Contents

A Letter from the Board

Hello dearest reader,

We welcome you to the seventeenth edition of Tvergastein! This issue sets its sights on the human—non-human dichotomy pervasive in contemporary discourse. It questions the strict boundary we've drawn between 'us' and 'others'; between a supreme human and an exploitable nature. This journal employs artwork, poetry, short stories, opinion pieces, and academic articles to not only bring forth some of the profound interdependence that transgresses these boundaries, but to show how reaffirming these boundaries leaves us ill-equipped to properly identify and combat some of the gravest challenges our planet faces. We hope that More Than Human impels you, the reader, to think about the myriad of life forms engaged in the simple process of reading this journal. We hope that you come away from it with inspiration to nurture these interconnections, to explore new relationships beyond our immediate selves, and to challenge the anthropocentrism that not only got us into this planetary mess, but is baked into many inadequate mainstream solutions.

We open with a piece by Emilija Barteskaite, who directs your attention to the millions upon millions of bacteria cells in our guts, accompanied by artwork by Lucía Aragón. Next, Ana De Luca and José Luis Lezama highlight the destructive tendency of conventional humanist scientific practices, arguing for a new episteme that recognizes our animal nature. This is followed by poetry by Daniel Fuller, who paints his intimate relationship with different landscapes. Jon Heli carries this theme forward, with a photo essay about his alliance with Norwegian forest. In turn, Austra Apiste follows up with a literary analysis, explicating the creation of what Arne Næss calls a 'place-person'—essentially an intimate and inseparable connection of person and place.

As you progress further into the journal, you will then meet Helene Kamfjord's first of two contributions, this one an acrylic painting of Nøkken, a mythological creature in Norse folklore. Bendik Sivertsen keeps the focus in Norway, problematizing infrastructure projects in the country's spectacular wetlands. Next, Magnus Hole Fjetland brings you into the field of psychology, taking issue with the anthropocentrism prevalent in the subject and profession, and offering insights from posthumanist theory. Then, you will meet Helene Kamfjord's second contribution, this being a watercolor painting of her friend Malin and her companion Feykja. Mikayla Marazzi follows this in stride with an ode to a companion of her own—her cat Judy.

Sofie Van Canegem will then bring you into the world of changing coastlines and the balancing act played out between conservation legislation and security concerns. An article by Jess Le Riche comes next, questioning the limitations of human knowledge in the face of things such as global warming via a literary analysis and the deployment of Timothy Morton's theory of hyperobjects. After this, Wouter de Rijk will give you a glimpse of the possibilities and potentials of a sense of connectedness, artfully describing his encounters at a jazz club. The penultimate piece, by Ty Tarnowski, urges you to consider virtual spaces such as RuneScape as taking place in broader networks that extend beyond the digital and the human. And finally, at the end of the journal you will find a contribution from Dusan Lovre, who invites you to the end of the world.

Above all, we hope that these humble contributions inspire you to fight for a world more habitable for all forms of life!

Editorial Board, 2022-2023

Illustration by Lucía Aragón

BACTERIO SAPIENS

Words by Emilija Barteškaitė

Are you human? What makes you human, biologically? You are made up of millions upon millions of animal cells, each with its organelles and nucleus, which includes your human DNA. But there are ten times more bacterial cells in your gut than human cells in your body (Zhang et al. 2015). Yet, even though your body has many times more bacterial than human cells, you know you are not a bacterial colony. So, what are those bacteria doing in your body? Are they a part of you?

Can your body fully digest the food you eat? If you eat plants at all, the answer is no. The fibres in plant material, namely cellulose, are indigestible to human digestive tracts (Gupta et al. 2019). However, some of the bacteria living in your gut can digest cellulose through complicated chemical reactions and may give it back to you as smaller carbohydrate components that your body can digest (Zhang et al. 2015; Fujimori 2021). The bacteria in your gut also produce some vitamins for you, assist the function of your central nervous system and protect your body from intruders, shaping your immunity (Wang et al. 2018).

How are the bacteria in your gut related to your brain? Your brain is the control center of your body, but you have also got a second brain – your gut. It is often referred to that way because of the importance that gut bacteria have on human mental health and neurological function (Ridaura and Belkaid 2015; Ochoa–Repáraz and Kasper 2016). For example, all the microbes that live in your gut, also known as gut microbiota, can produce and regulate the levels of a major neurotransmitter, serotonin (Ridaura and Belkaid 2015). You might have heard about serotonin as the ”feel–good” hormone, but it is responsible for many more functions throughout your body, working both as a hormone and a neurotransmitter (Ridaura and Belkaid 2015). As a hormone, serotonin influences bodily functions outside of the central nervous system (Yadav 2013), such as movements inside the gut, constriction and dilation of blood vessels and regulation of heart rate (Berger, Gray and Roth 2009). As a neurotransmitter, it works in the central nervous system, the brain and the spinal cord (Yadav 2013), and influences mood, perception, memory, stress responses and so on (Berger, Gray and Roth

2009). Another proposed link between the brain and the gut could be the relationship of gut microbiota with mental health conditions, such as anxiety, dementia, and depression, which are also often related to obesity (Ochoa–Repáraz and Kasper 2016). It is possible that dysbiosis (the imbalance of the different bacteria in your gut), induced by diet changes, leads to these conditions (Ochoa–Repáraz and Kasper 2016). So if your gut microbiota has so much influence on the way you feel and your mental health, where does that leave you as an independent human being with your own emotions? You might sometimes think that your emotions are at the core of the human experience. But does the fact that gut bacteria affect your mood somehow make you less human? Think about it in a different way: there is no being human without being with bacteria. Gut bacteria influencing your emotions is the way it should be, and this is the core of the human experience: being reliant on other organisms to be ourselves.

Could you live without the bacteria inside you? Surely, none of the benefits described above are essential for existence? For existence? No. But for a life of good quality? Absolutely

(Gilbert and Neufeld 2014). Dysbiosis might lead to lethal liver problems (Konturek et al. 2018), allergies, inflammatory bowel disease, diabetes, and even cancer (Guarner and Malagelada 2003; Zhang et al. 2015). Ideally, you would rather have healthy bacteria in your gut than these diseases.

What is the role of antibiotics in this conversation? You might know about some bacteria that cause diseases, and that taking antibiotics cures your body. Unfortunately, antibiotics kill not only the bad but also the good bacteria and put you in a state of dysbiosis (Blaser 2016). To return your gut to health, you need to take probiotics, which return the good bacteria inside you (Wang et al. 2018). Of course, it is essential to take the medicines prescribed by your doctor even with their current side effects, but there are recent scientific advances that will hopefully create drugs that can only target the pathogenic, or dangerous, bacteria, and leave the good bacteria in your gut unaffected (Maier et al. 2021).

Bacteria can cause diseases, but could they also cure them? Synthetic biology focuses on genetically engineered organisms with desirable functions. Recent breakthroughs in the field now show that genetically engineered bacteria could potentially diagnose illnesses in the gut, or even cancer, and may be engineered to have therapeutic functions and heal some diseases (Landry and Tabor 2018). There may still be a long way until it is safe to use such bacteria to treat living human beings (Landry and Tabor 2018), but this shows that it might become possible to intertwine human and bacterial lives even more than we can currently imagine.

So are the bacteria in your gut an essential part of who you are? You could probably survive without them, but would you still be fully yourself? Humans really need gut bacteria to thrive, so perhaps it is best to embrace them living inside of us and do our best to keep them happy. In return, they provide happiness for us.

References

Berger, Miles, John A. Gray, and Bryan L. Roth. 2009. "The Expanded Biology of Serotonin." *Annual Review of Medicine* 60: 355–366. https://doi.org/10.1146/annurev.med.60.042307.110802.

Blaser, Martin J. 2016. "Antibiotic Use and Its Consequences for the Normal Microbiome." *Science* 352 (6285): 544–45. https://doi.org/10.1126/science.aad9358.

Fujimori, Shunji. 2021. "Humans Have Intestinal Bacteria That Degrade the Plant Cell Walls in Herbivores." *World Journal of Gastroenterology* 27 (45): 7784–91. https://doi.org/10.3748/wjg.v27.i45.7784.

Gilbert, Jack A., and Josh D. Neufeld. 2014. "Life in a World without Microbes." *PLoS Biology* 12 (12): e1002020. https://doi.org/10.1371/journal.pbio.1002020.

Guarner, Francisco, and Juan–R Malagelada. 2003. "Gut Flora in Health and Disease." *The Lancet* 361 (9356): 512–19. https://doi.org/10.1016/S0140-6736(03)12489-0.

Gupta, Praveen Kumar, Shreeya Sai Raghunath, Deepali Venkatesh Prasanna, Priyadharsini Venkat, Vidhya Shree, Chandrananthi Chithananthan, Shreya Choudhary, Krithika Surender, and Keerthana Geetha. 2019. "An Update on Overview of Cellulose, Its Structure and Applications." In *Cellulose*, edited by Alejandro Rodríguez Pascual and María E. Eugenio Martín, 1–21. London: IntechOpen. https://doi.org/10.5772/intechopen.84727.

Konturek, Peter Christopher, Igor Alexander Harsch, Kathrin Konturek, Monic Schink, Thomas Konturek, Markus F. Neurath, and Yurdaguel Zopf. 2018. "Gut–Liver Axis: How Do Gut Bacteria Influence the Liver?" *Medical Sciences* 6 (3): 79. https://doi.org/10.3390/medsci6030079.

Landry, Brian P., and Jeffrey J. Tabor. 2018. "Engineering Diagnostic and Therapeutic Gut Bacteria." In *Bugs as Drugs*, edited by Robert A. Britton and Patrice D. Cani, 331–61. Washington, DC: ASM Press. https://doi.org/10.1128/9781555819705.ch14.

Maier, Lisa, Camille V. Goemans, Jakob Wirbel, Michael Kuhn, Claudia Eberl, Mihaela Pruteanu, Patrick Müller, Sarela Garcia-Santamarina, Elisabetta Cacace, Boyao Zhang, Cordula Gekeler, Tisya Banerjee, Exene Erin Anderson, Alessio Milanese, Ulrike Löber, Sofia K. Forslund, Kiran Raosaheb Patil, Michael Zimmermann, Bärbel Stecher, Georg Zeller, Peer Bork, and Athanasios Typas. 2021. "Unravelling the Collateral Damage of Antibiotics on Gut Bacteria." *Nature* 599 (7883): 120–24. https://doi.org/10.1038/s41586-021-03986-2.

Ochoa–Repáraz, Javier, and Lloyd H. Kasper. 2016. "The Second Brain: Is the Gut Microbiota a Link between Obesity and Central Nervous System Disorders?" *Current Obesity Reports* 5 (1): 51–64. https://doi.org/10.1007/s13679-016-0191-1.

Ridaura, Vanessa, and Yasmine Belkaid. 2015. "Gut Microbiota: The Link to Your Second Brain." Cell 161 (2): 193–94. https://doi.org/10.1016/j.cell.2015.03.033.

Wang, Hao, Chuan–Xian Wei, Lu Min, and Ling–Yun Zhu. 2018. "Good or Bad: Gut Bacteria in Human Health and Diseases." *Biotechnology & Biotechnological Equipment* 32 (5): 1075–80. https://doi.org/10.1080/13102818.2018.1481350.

Yadav, Vijay K. 2013. "Serotonin: The Central Link between Bone Mass and Energy Metabolism." In *Translational Endocrinology of Bone,* 51–62. Cambridge: Elsevier. https://doi.org/10.1016/B978-0-12-415784-2.00005-1.

Zhang, Yu–Jie, Sha Li, Ren–You Gan, Tong Zhou, Dong–Ping Xu, and Hua–Bin Li. 2015. "Impacts of Gut Bacteria on Human Health and Diseases." *International Journal of Molecular Sciences* 16 (4): 7493–7519. https://doi.org/10.3390/ijms16047493.

Science, An All Too Human Practice In A More Than Human World

Words by Ana De Luca y José Luis Lezama

Even the wisest among you is only a conflict and mix of plant and ghost

/Nietzsche, Thus Spoke Zarathustra

This text argues that conventional scientific practices, inherited from the humanist tradition, continue to exclude most of humanity and have long been complicit in the destructive relationship with the non-human world. The authors propose a new episteme that, by acknowledging and coming to good terms with our own animal nature, seeks to promote more ethical and purposeful scientific practices.

Could we establish in our scientific practices a humble, ethical, and equitable dialogue with the non-human world when we have not even resolved our frivolous forms of interhuman coexistence? We believe that a new, encouraging, and creative relationship and dialogue with the non-human realm could be achieved through a different, compassionate, and ethical form of knowledge of the world. Scientific practices are essentially utilitarian, anthropocentric, and an exercise of power. It is an all too human practice. Most science continues to transfer those perverse, pathologically devastating, destructive, and utilitarian relationships of domination humans maintain with the more than human world. Conventional science works from the legacy of the Humanist tradition that claims that a *man is the measure of all things*, which consecrates the utmost anthropocentric and androcentric position, where the body of the heterosexual white man is what is thought about as human. This universality proclaimed by humanism is false, self-referential, and self-indulgent, as it excludes most of humanity (Braidotti 2019). Furthermore, it has radically divided nature from what is human. Being human is presented as exceptional and superior to nature and animals (Svampa 2018). This entrenched mentality not only distances us from nature and what is animal, but also degrades our own animality to something shameful.

In this sense, most scientific practices and institutions—bound to this humanist thought—have largely excluded most of humanity, including women, people from the Global South, indigenous groups, those with disabilities, children, and other people not aligned with the characteristics of the *andros* of ancient Greece. As a result, only a select few have the privilege to know and to speak on behalf of all humanity (Maffia 2007). These characteristics of Modern Science should allow us to remove the veil of ingenuity from the false belief that science is neutral and objective. There is no sphere of human existence unaffected by power, and science, as a social practice, emerges as a subtle yet effective form of power (Foucault 1980).

This humanist tradition is nothing other than *inhumane*. The prevailing science is what Val Plumwood (1993) called a sado-dispassionate model, in which the lack of emotion and ideal of neutrality in certain contexts is an indicator of a great moral failing. The positivist model of science, whether in the natural or social sciences (Comte 2009; Durkheim1982), assumes that one can objectively stick to facts without preconceptions, judgments, or prejudices. Under this model, the scientist abandons their being in the world, along with all their passions and illusions, and thus loses that which makes us human.

It is therefore necessary to challenge scientific practices not only to recreate what is human in science, but also to venture into new ways of being, knowing, feeling, dialoguing, and living together with the more than human. A kind of *Copernican revolution* awaits to be able to take a fresh look at the eyes of the Other fused with ours, decentering ourselves as the owners of the world and thereby transcending our relationship of domination and subjugation of the non-human. To do so, conventional scientific practice should realize that the act of knowing is not one that is achieved alone. Science is a tentacular practice (Haraway 2016), accompanied by myriad human and non-human beings with whom one thinks, feels, and takes care of. Our bodies are a network comprising water, minerals, and millions of viruses, bacteria, and fungi that at some point in the autopoietic interaction become capable of consciousness, thought, and feeling. That is to say that we not only work with the more than human, we not only study the more than human, but we also are the more than human. To acknowledge this involves a continuous exercise in the search for the Other, beginning above all with our own Other, which we have denied—namely, the animal that we are being and that we are becoming (Derrida 2008; Deleuze and Guattari 1988).

It is time for a new episteme, a new knowledge that seeks an interspecies dialogue based on careful listening, mutual care, radical reciprocity, and tenderness. It is time to open the doors and windows of our unconscious—our collective unconscious—which seems willing to show us its secrets and free us from so many prisons. This would entail a true liberation of our individuality blended with our communality, and by incorporating these elements we could practice a more purposeful and ethical science.

References

Braidotti, Rosi. 2015. *Lo Posthumano*. Barcelona: Gedisa Editorial.

Comte, Auguste. 2009. *The Positive Philosophy of Auguste Comte.* Cambridge University Press: Cambridge.

Deleuze, Gilles and Guattari Felix. 1988. *Mil Mesetas.* Valencia: Pre-Textos.

Derrida, Jacques. 2008. *El Animal que Luego Estoy Si(gui) iendo.* Madrid: Trotta.

Durkheim, Emile. 1982. *The Rules of Sociological Method*. New York: Free Press.

Foucault, Michel. 1980. *Power/Knowledge.* New York: Vintage Books.

Haraway, Donna. 2016. *Staying with the Trouble: Making Kin in the Chthulucene.* Durham: Duke University Press.

Nietzsche, Friedrich Wilhelm. 1996. *Human, All Too Human: a Book for Free Spirits.* Translated by R. J. Hollingdale. Cambridge: Cambridge University Press.

Plumwood, Val. 1993. *Feminism and the Mastery of Nature.* London: Routledge.

Svampa, Maristella. 2018. "Ecofeminismos y Feminismos Populares." Filmed November 2018 at Canal Encuentro. https://www.youtube.com/watch?v=TveVMH3Y4YI

THREE

COUNTRIES

(POEMS BY DANIEL FULLER)

Each of the following poems is drawn from a landscape in which I've lived: Enclosure, from the rural agriculture of Lincolnshire, England; Acknowledgment from Gadigal land, in the harbours and coasts of Sydney, Australia; and These trees from the wooded riverbanks of Oslo, Norway.

ENCLOSURE

I am enclosed,
bound by each murmur
in the fields and their habit of
marking the fruit of each day
under a shadow ruddied with sun.

Nothing else grows here.
Only the putrid yellows,
marking the end of solidarities,
and the mangling of this blessing,
this heavy acknowledgment

to which we have given over our dancing.
You see I am only ever speaking
of things and not washing my hands
in their soil. My mind is denied
any such embrace.

And I ache still for a little more.

ACKNOWLEDGMENT

A rain, glazed across the pensive sky
or at least the pastel inventions that accompanied the days after it.
Along the lines of each of those nights and the way the heavens
looked worn as though to atone for the rancid newness
mottled over stolen land.

Our walking by the harbour;
skimming laughter across the water, outlining it with gentleness
whose touch I had rehearsed in breath on my lips when bound
against the pallid horizon of reclaimed land,
hours from the sea.

For to breathe,
as was only befitting the occasions on which we knew
that cluttered land by sinking our voices into
its soil until it was brittle enough to bear
the weight of us.

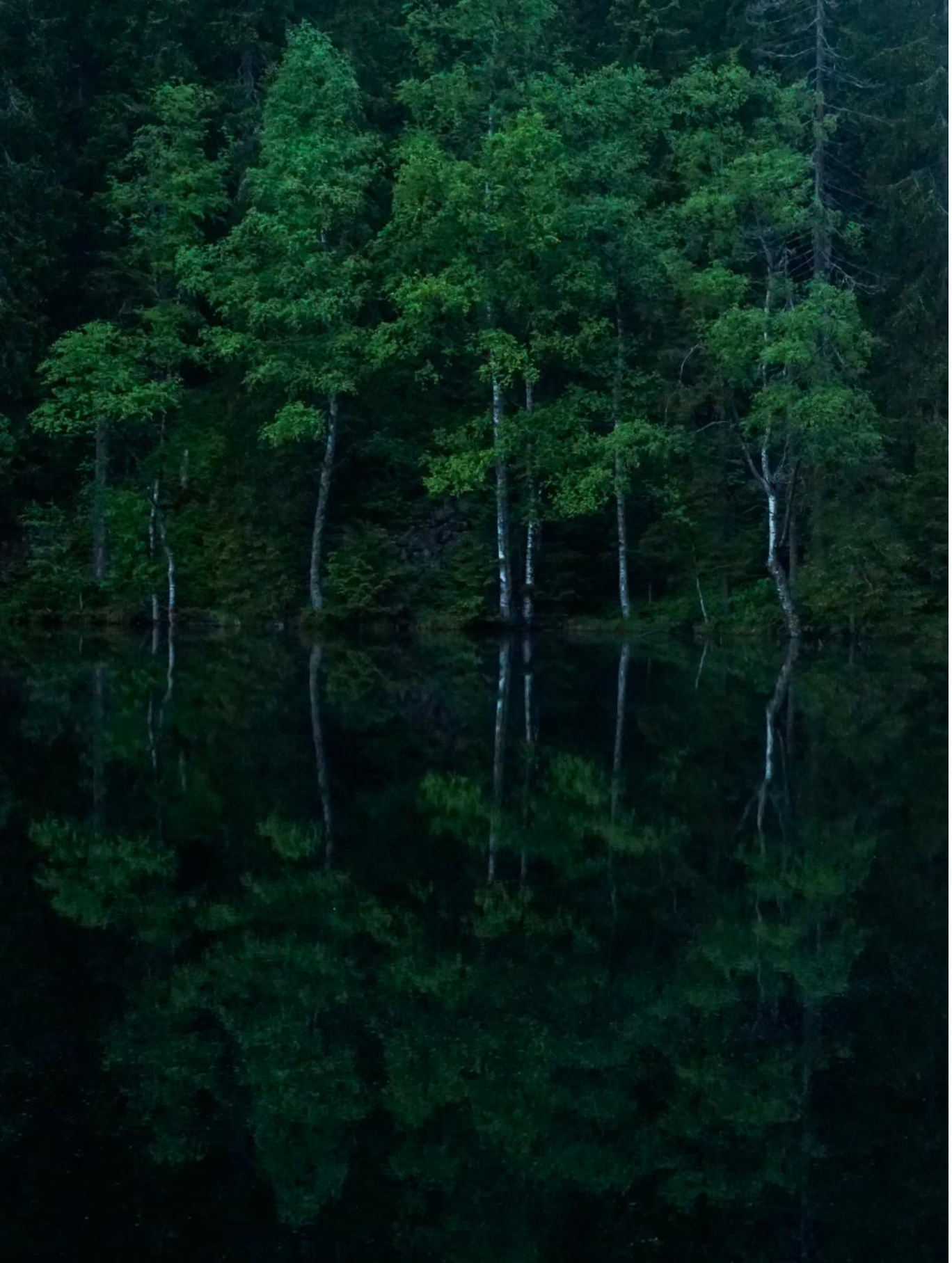
THESE TREES

These trees have ministered to me of late,
row on row, these branches, bearing
the clattering of light as on windows
in rooms I have not yet entered.

Each circular breath that marks the thoughts
about their sapling youth wears
a certain fragility; like they are still draped
in the interruptions of past winters.

Have we not begun our solitude
in better ways? Have our own trembling limbs
not strained to meet a breathless sky?
Indeed such figures have remained our burden.

Now I spend all my time forgetting
how it looked every other time, fixated
as I am on the literature
and the green of their unveiling.



SKOGEN, TREET OG MENNESKET

Words by Jon Heli

Det var ein somarkveld i juni eg bestemte meg for å leggje ut på mi første overnatting åleine i skogen. I utgangspunktet hadde eg planar om å gå ein lengre tur, men eg kjente at ryggsekken og handleposen med mat ville vere tungt å bære i nokre timar til. Eg hadde kome litt for seint i gong med turen, og måtte improvisere med ein plan B. I luftlinje var avstanden kort til næraste innsjø som var eigna til telting. Men som dei fleste veit, ser verda annleis ut frå bakkeplan enn på kart. Dette gjeld kanskje særleg skogen, med sitt ujamne og uforutsigbare landskap. Eg måtte gå opp og ned fleire toppar, kave meg gjennom busker og tre, balansere på plankar og røter, og til slutt plumpe i ein vasspytt. Det einaste paret med sko eg hadde med blautla føtene mine. Eg hadde også fått nokre sår frå skogens busker. Det var overskya, men varmt. Det regnde i små dosar, men tørka raskt. Den fuktige lufta la seg som eit klamt lag rundt dei bare armane mine, og saman med den tunge ryggsekken gjorde dene meg gjennomblaut av svette. Nokre minutt etter eg hadde slått opp teltet og spist, byrja det å regne kraftig. Det var ikkje så mykje anna å gjere enn å lese ein bok med haudelykt i soveposen. Regnet spratt på kunstfiberet, og teltet knitra. Mens eg låg der og hørte på regnet og las, traff søvnen.

Morgonen etter kjente eg meir av skogens dufter og lydar. Den jordaktige dunsten som kom frå regnvåte røter, busker, berg og tre, var noko eg kunne pusta inn i timevis. Vinden flaug over innsjøen og rasla i vegetasjonen. Fuglane kvitra ein stad i det fjerne. Eg var til stades ved vatnet, trea og berget eg satt på. Ting som ein vanlegvis bryr seg med

var ikkje viktige i dette augeblikket. Pulsen sank, og eg kjende på ei djup indre ro. Fokuset på lydane lot tankane sveve forbi som skyer på himmelen. Eg må vanlegvis setje av tid for ro når eg oppheld meg i byen. I skogen kom det av seg sjølv. Her høyrer ein lyden av vind som får tre til å danse, istadenfor lyden av biltrafikk og festar i nabolaget. Ein kjenner dufta av furu og mose, istadenfor lukta av eksos og gatekjøkkenmat. Miljøet og landskapet har mykje å seie for erfaringene ein dannar seg, og korleis ein opplever sine tankar. Sanseapparatet registrerer nye lydar, dufter og vibrasjonar.

I skogen finn ein både unge og eldgamle livsformer om kvarandre. Frisk mose og gras klatrar oppover råtne stubbar. Innsekt sprett på vasspyttar og blir jakta på av fiskar, fuglar og froskar.

Skogen er ein vital del av jorda si rike biosfære med sin enorme variasjon av plantar, dyr og mikroorganismar. Det er i skogen mesteparten av jordbunden biodiversitet lever. Likevel er det berre ein liten andel av livet i verdas skogar som er dokumentert. Større utstrakte skoger, som junglane i Papua Ny-Guinea og Amazonas har ei rekke planteartar som ikkje har blitt grundig studert i botanikken. Ein har har eit unøyaktig estimat på rundt 300 000 - 500 000 planteartar i verdas skoger (Ghanzoul 2005, 113). Altså, vi veit ikkje ein gong kor mange plantar som eksisterar i verda.

Pluraliteten av livsformer konkurrerer og samarbeider for tilværelsen. Til dømes fant skogsbiologen Suzanne Simard ut at tre kommuniserer med kvarandre og med andre artar gjennom komplekse nettverk under bakken (Banks 2022). Nettverket kalles *mykorrhiza* og består av sopp (*mykes*) og rot (*rhiza*). Gjennom desse underjordiske forbindingene, deler tre og sopp på næringstoff, karbon og vatn. Soppen spis sukker frå røtene som dei ikkje kan produsere sjølv. Til gjengjeld får trea sine røter ekstra vatn og næring frå soppen, som igjen sendast vidare til andre tre. I si forskning fant Simard også eit "modertre" som fungerer som knutepunkt i desse nettverka. Dei gjenkjenner sine avkom, og sender ekstra næring til desse. Når eldre tre døyr, sender dei næring og informasjon til komande generasjonar av tre. Simard kalte dette intrikate kommunikasjonssystemet for *The Wood-Wide Web*, og viste med dette at det finnast ei form for intelligens i skogen (Banks 2022, 17).

Alt dette får meg til å reflektere litt over kva vi egentlig gjer med verdas skogar. Synet av stubbar i skog og mark, minnar meg om korleis dei hoggast ned i stor skala. Verdas skogar vert utsatt for flatehogst som et resultat av ekspansjon av jordbruk, industri og urbanisering (Ghanzoul 2015, 120). I løpet av 1800-talet sikra vestlege stater og industriaktørar seg eigedomsrett over svære naturområde. Eksklusive rettar gav industrien moglegheit til å utnytte skogen etter eige ynskje, og i tillegg kunne større område bli brukt for spesialtilpassa produksjon for internasjonale marknadar. I enkelte land, gav også disse eigedomsrettane makt til å ekskludere folk frå skogen, enten det var for å kunne sikre seg mat, eller for rekreasjonens skyld. Fleire såg at skogområde gjekk tapt. Ein av dei var forskaren George Perkins Marsh. Boka til Marsh, *Man and Nature* (1864, sitert i Ulloa 2005, 80), argumenterte for at vitskapleg innovasjon kunne restaurere tapt natur og samtidig som ein kunne effektivisere skogbruken. Det førte til at vitskapsfolk fekk tilgang til statleg og kommersielt eigd land for å kartleggje, analysere, måle og vurdere kva slags ressursar skogen hadde.

Slik Astrid Ulloa (2005, 80-82) argumenterer, produserte Marsh og kollegaane hans spesifikke måtar å forstå naturen på. Gjennom desse nye og avanserte naturkonserveringsteknikkane blei menneske framandgjort frå ikkje-menneskeleg liv, deriblant skogen, og dyra som lev der. Dette antydar at naturen blei eit objekt underkasta menneskeleg forvalting. Naturens utvikling blei, i dette perspektivet, avhengig av menneskeleg innblanding. Skulle vi tru industriegarane og staten var det beste for skogen å kartlegge kva slags ressursar som fanst, og vurdere deira marknadsnytte etter utvinning. Desse verktøya gav staten kontroll over naturlandskap, og industrien moglegheit til å trekke ut ressursar i skogen for profitt.

Ironisk nok redda ikkje den vitskaplege konserveringa verdas skogar. Dagens situasjon har blitt meir prekær enn den var i Marsh si tid. Heile 75% av jordas landareal har blitt "betydeleg omdanna" av menneskelege aktivitetar: Ein tredjedel av alle skogtypar har forsvunne globalt, og vi mistar ti millionar hektar med skog i året, noko som tilsvarar Portu-

gal sitt areal (Hessen 2020). Til trass for at menneske utgjer 0,001% av verdas biomasse, tek vi god plass, noko som går på kostnad av dyr, plantar, og skog og mark (Hessen 2020, 77, 82 og 83). Konserveringsprosjektet til Marsh passa statens og industriens logikk, der skogen ble forstått som ein ressurs for kontroll og økonomisk utbyte. Det reflekterer ei materialitetsforståing som har gjennomsyra vestleg filosofi sida antikken, om ikkje lengre. Tim Ingold (2012, 432) argumenterer for at vestleg kunnskap og relasjonsbygging rundt materialitet er ei forlenging av Aristoteles sin *hylomorfisme*. Det består av *hyle* (stoff) og *morf* (form), og når desse to blir slått saman, skapast eit objekt. Noko blir skapa når stoffet, eller råmaterialet, blir forma av eit menneske. Stoffet blir vurdert og brukt utifrå menneskets evner, kreativitet. Det er passiv materie, og ventar på menneskeleg innblanding, eller form, for å ha eit fullkome formål.

Slik eg ser det, forsterker Marsh,

hans kolleger og etterkomarar sin vitskaplege konservering *hylomorfismen*. Perspektivet som gjennomsyret dette prosjektet, handla om korleis skogen kunne tjene skogseigarar. Industriteknikkene gav oss meir *hyle*, ut frå skogen, men la igjen monokulturar og ødelandskap. Skogen blei radikalt objektivisert gjennom kombinasjonen av *hylomorfisme* og vitskapleg konservering. Verdas skogar var ikkje slik Simmard argumenterer, eit intrikat og levande system med eigenverdi, men heller ein *hyle* som får sin verdi realisert gjennom tømmerindustrien, jordbruk, vegutbygging og lignande. Teknologiske evner gav oss moglegheita til å hente ut ressursane, men det gjorde oss insensitive til landskapets behov, og apatiske til komplekse livssystem som avhenger av dets vitalitet. Kvar dag underslår det moderne samfunns lyster livsformars behov.

Det menneskelege subjekt, rettferdeggjer sin øydeleggelse av skog og tre gjennom eigedomsrett og marknadslogikk. *Aktør-nettverk teori* (ANT) er eit forsøk på å rekonseptualisere den vestlege forståinga av natur. ANT foreslår at vi kan tenkje utover det menneskelege subjekt, og gir rom til fleire livsformer. Det betyr at ein kan finne subjektive kvalitetar ikkje berre i menneske, men også i ting, miljø og dyr (Trentman, 2009, 238; Navaro-Yashin 2009, 11-12). Denne vendinga i materialitetsstudier tenkjer nytt om menneskelege forhold til ikkje-menneskelege krefter som ting, økologi, landskap og dyr (Connolly 2013, 399). Dette vil seie at også ikkje-menneskelege aktørar vert tildelt agens. *Hylomorfismen* som har gjennomsyra menneskes orientering til landskap, objekt og levande vesen, er ikkje tilstrekkeleg for ANT. Dersom ein lyttar og luktar i skogen, kan ein kanskje kjenne nokre av dei ikkje-menneskelege kreftene frå dette landskapet, og ikkje korleis vi kan hente ut meir, når skog og mark forsvinn i faretruande hastighet. Potensielt kan ein tur i eit slikt landskap transformere tankemønster og handling.

ANT forsøker å redefinere vårt forhold til omgivelsane. Verdas skogar er eit skattekammer for livsformer, kunnskap og meiningsfylte erfaringar. Over heile verda er disse verdiane no trua.

Å kome i kontakt med naturen, som ein gjer på skogstur, gir oss moglegheit til å endre vårt perspektiv på naturen. Vi kan gå frå å behandle

skogen som eit objekt, til å erfare og dvele i dette levande landskapet. Det taktile, det luktmessige og audiovisuelle kan by på ein type intensitet som auker livsglede og livskvalitet, og kanskje bryte med den domierende *hylomorfismen*. Misforstå meg rett, det er ikkje bere ein skogstur som skal til for å sette oss på rett kurs. Det er økonomiske modellar, politiske prioriteringar og djuprota forbrukskultur som ligg til grunn for øydelegginga av natur og miljø. Å sende framtidas generasjonar på fleire skogsturar vil ikkje utfordre dei økonomiske og politiske maktene som spis opp dei siste restane av skog, mark, fjell og hav. Likevel håpar eg at du føler deg inspirert til å leggje ut på ein skogtur. Kanskje det er ein tur eller to som må til for å etablere det følelsesmessige sambandet til naturen, og får oss til å innsjå at alt i verda blir irrelevant dersom naturen, det mest fundamentale for alt liv, går til grunne.

References

Banks, Kerry. 2022. "The 'Wood-Wide Web,' Explained" *National Geographic* 134, (no.5): 18.

Balée, William. 1994. *Footprints of the Forest: Ka'apoor Ethnobotany - The Historical Ecology of Plant* Utilization by an Amazonian People. New York: Columbia University Press.

Connolly, William E. 2013. "The 'New Materialism' and the Fragility of Things." *Millennium* 41, (no. 3): 399–412. https://doi.org/10.1177/0305829813486849.

Ghazoul, Jaboury. 2015. *Forests: A Very Short Introduction.* Oxford University Press.

Hessen, Dag O. 2020. *Verden på vippepunktet : hvor ille kan det bli?* Oslo: Res Publica.

Ingold, Tim. 2012. "Toward an Ecology of Materials." *Annual Review of Anthropology* 41: 427-442. http://www.jstor.org/stable/23270720.

Navaro-Yashin, Yael. 2009. "Affective Spaces, Melancholic Objects: Ruination and the Production of Anthropological Knowledge." *The Journal of the Royal Anthropological Institute* 15, (no. 1): 1-18. http://www.jstor.org/stable/20527631.

Posey, Darrell A. 1985. "Indigenous management of tropical forest ecosystems: the case of the Kayapó Indians of the Brazilian Amazon." *Agroforestry Systems,* 3(2), 139–158. https://doi.org/10.1007/BF00122640.

Trentmann, Frank. 2009. "Materiality in the Future of History: Things, Practices, and Politics." *Journal of British Studies* 48 (no. 2): 283-307.http://www.jstor.org/stable/25483036.

Ulloa, Astrid. 2005. *The Ecological Native: Indigenous Peoples' Movements and Eco-Governmentality in Columbia*. London: Routledge.

Here then may be lived a life of the senses so pure, so untouched by any mode of apprehension but their own, that the body may be said to think. Each sense heightened to its most exquisite awareness, is in itself total experience. This is the innocence we have lost, living in one sense at a time to live all the way through.

/Nan Shepherd

Creation of a Place-Person

in Nan Shepherd's

The Living Mountain

Words by Austra Apsite

In the 'Foreword' Nan Shepherd calls her ventures into the Cairngorm Mountains 'a traffic of love' (Shepherd [1977] 2014, xxxvii). And so, her writing reflects this kind of careful piety and devotion that can only be achieved and motivated by love. This book is a witness of how this love leads to the creation of a place-person – a relationship where a person is so intimately connected to a place that they become almost inseparable, where one becomes porous to the other, and through this deep understanding of the Place one comes to know oneself. I propose to view this work as a philosophical exploration, or genesis, in the creation of a place-person (borrowing the terminology from Arne Næss). I would like to highlight what I take to be the main elements whose entanglement serves in this creation. The first is the specific kind of understanding of knowledge that she employs. This kind of thinking to an extent is embedded in Emerson's ideas of insight and revelation and the kind of knowledge that is not simply located in your head but rather is distributed to your whole sensuous body. This further leads us into the second element – phenomenology. The kind of philosophy that places you firmly in your own body and into the wider interiority of the earth itself. And further, it allows for different kinds of consciousnesses to arise. Honouring 'our human expressiveness' allows us 'to eavesdrop on the many other eloquences with which the Earth speaks itself' (Mueller 2017, 95). Neatly unravelling all of these elements will arguably prove to be an impossible endeavour, as impossible as Shepherd herself realises is the untangling of the different aspects of the mountain itself.

After Nan Shepherd has shown us the first glimpses of the mountain, at the end of the first chapter she writes: 'Place and a mind may interpenetrate till the nature of both is altered. I cannot tell what this movement is except by recounting it' (Shepherd [1977] 2014, 8). This odd, reciprocal belongingness to a place finds an echo in Arne Næss' concept of the 'place-person'. The Norwegian philosopher and an early founder of the Deep Ecology movement first coined the term in his essay about his cabin at Tvergastein (Næss 2008a). This term seems to have a rather elusive, hard-to-describe meaning. The closest one might come to describing the idea is by thinking of the Place (Næss capitalises the word to accentuate its specific meaning, that is above the ordinary) as a home. However not 'home' in the now vastly used sense of a building where one lives, but rather in the sense of where one belongs (Ibid., 45). Place in this sense is a 'part of myself', it means the close internal relationship to one's surroundings (Ibid.). In this essay, Næss starts the section on the 'Global Place-Coercive Process' with a rather grim proclamation: 'There seems to be no more place for PLACE anymore' (Ibid.). Although Arne Næss' academic work takes place a few decades later than Nan Shepherd's, already in her time displacement brought on by war, modernisation, ever-growing global movement, relocation and the increasingly fast pace of life makes this proclamation relevant. Shepherd herself almost worryingly at the beginning of her book says: 'It is a tale too slow for the impatience of our age, not of immediate enough import for its desperate problems' (Shepherd [1977] 2014, 1). In this fast-paced world to belong so completely, so unequivocally to a place, that you feel yourself to be a part of it, seems almost like a rebellious act.

The question of 'knowledge' comes into play right at the outset of the book with Shepherd announcing her personal assignment 'to know its [the mountains] essential nature'(Ibid.). What this really means – the real gravity of this task – is distilled by Shepherd unveiling the insufficiency of the mere scientific facts as she says, '[..]so many square miles of area, so many lochs, so many summits of over 4000 feet— but this is a pallid simulacrum of their reality' (Ibid.). It is a different kind of knowing that she is looking for – 'knowledge that is a process of living' (Ibid.). It is not the kind that is just an accumulation of an exhaustible amount of facts, it is rather the opposite. As Robert Macfarlane observes: 'Her mountain is "total" insofar as it exceeds the possibility of our capacity ever to know it entirely' (Macfarlane 2014, xxiv). In accepting its continual change, it is rather like knowing a loved one. This is what it means to have knowledge that can only be attained by 'the process of living' – it is knowledge that is alive, that is shifting, interconnected and changing, it requires you to

be present and to be a part of it; only by continually living with it can you know it. Here there also seems to be a glimmer of the task set by Emerson – to escape the age of retrospection and to form 'an original relation to the universe,' to have a 'philosophy of insight' and a 'religion by revelation' (Emerson [1836] 2003, 35). Emerson, being one of her forming influences (Walton 2020a, 16), sets the stage for the possibility of a primaeval knowledge and unmediated relationships. While her quest for knowledge seems to be inspired by him, in attaining it she deviates even from Emerson. While for Emerson the human is a stable centre of consciousness from which the world is being observed, for Shepherd there is no point in trying to achieve an objective perspective, instead 'the human is revealed to be a moving part of a dynamic whole' (Ibid., 16).

With this kind of outlook, she, in a way, dethrones human knowledge, the objective knowledge; she displaces it and disperses it throughout her whole body. Knowing becomes inseparable from living, from movement. The body becomes porous and every connection, every engagement with the world becomes a source of knowledge. Shepherd comes back to this question throughout the book, and her conviction of different kinds of knowing gets affirmed over and over again: 'Though I did not know it then, I was learning my way in, through my own fingers, to the secret of growth. That secret the mountain never quite gives away. Man is slowly learning to read it. He watches, he ponders, patiently he adds fact to fact' (Shepherd [1977] 2014, 58). However, this 'adding fact to fact' is not being done with an end goal of complete knowledge in mind. She warns us at the very beginning that, '[..] one never quite knows the mountain, nor oneself in relation to it', rather 'understanding of the mountain's interrelations serves only to finesse the real into a further marvellousness' (Macfarlane 2014, xxiv). This continuous wonder immerses her deeper and deeper into the mountain.

'What more there is lies within the mountain. Something moves between me and it' (Shepherd [1977] 2014, 8). Here Nan Shepherd's assignment that she sets for herself at the very beginning of the book – 'to know its [the mountains] essential nature' (Ibid.) – gets a more profound undertone. If her belongingness is

embedded in the mountain, then to know the mountain is to also know something essential about herself. With this mindset, her words become pregnant with layers of meanings, relationships, and textures. What is the hyphen between the terms 'place' and 'person'? Even though Shepherd was not acquainted with the term place-person, her works seem to be a direct answer to this question, an attempt at understanding and explaining this link of reciprocity, this dash that ties a person to his Place, that has tied Shepherd to her Mountain.

She sees these links everywhere in the mountain, in the way the flight of the swifts 'make visible and audible some essence of the free, wild spirit of the mountain,' (Ibid., 61), in the way the Golden Eagle 'binds the strength of the wind to its own purpose, so that the more powerful the wind the more powerful is the flight of the bird' (Ibid., 62), in the way that 'roes melt into the wood' and in dropping their heads 'become again part of the earth' (Ibid., 72). Importantly she finds the mountain in the people who live there as well. Her whole portrayal of the mountain and of the phenomenological environment as its milieu and ambience (Clark 2014, 277), 'centres on the understanding that this is a land which shapes its people as they shape it' (Carter 2001, 32). The mountain's manifestations are thoroughly integrated within the people – their personalities, their way of thinking, in 'wildness of [their] speech' and in their figures that can be 'sturdy' or 'shapely in feature as a precipice' (Shepherd [1977] 2014, 83-85). Shepherd writes: 'These people are bone of the mountain. As the way of life changes, and a new economy moulds their life, perhaps they too will change. Yet so long as they live a life close to their wild land, subject to its weathers, something of its own nature will permeate theirs. *They will be marked men*' (Ibid., 89).

What she discovers is the mountain itself speaking through the people. In this, she places human speech in the midst of, as Mueller puts it, 'a vast multitude of overlapping pulses, rhythms, beats, sighs, beeps, rumbles, waves, moans, hiccups, burps, buzzes, and hymns,' (Mueller 2017, 98). In seeing humans as part of the eloquence of the mountain, these people are seen as part of the puzzle of the mountain, they are not something outside of the mountain, they are the mountain itself 'for the mountain is

one and indivisible, and rock, soil, water and air are no more integral to it than what grows from the soil and breathes the air. All are aspects of one entity, the living mountain' (Shepherd [1977] 2014, 48). Each layer that gets uncovered – the air, the soil, the plants, the animals and birds, and the humans – each gets revealed as 'partaking deeply and fully of a common mystery, illuminating some local region of that mystery' (Mueller 2017, 97). She herself comes to see that she is also a part of that puzzle and in that she has established the link, by seeing herself reflected in the mountain she has become an expression of its total life.

This feeling of being immersed, of being in an inside permeates Shepherd's writing. At first, it is a more tangible, physical realisation that manifests itself first when she climbs the highest peak of the Cairngorm group – Ben MacDuih – and the astonishment she feels when she 'find(s) no spaciousness for reward, but an interior'; to find that 'a mountain has an inside' (Shepherd [1977] 2014, 16). This sudden awareness of the mountain referring you back to itself, this direction inward, this inescapability of interiority at the same time refers Shepherd deeper inside herself. Like the phenomenologist Martin Lee Mueller she seems to realise that 'we are insides within insides, within insides', which simply leads to the realisation that 'Every subjectivity is a fractal, or incarnation, or incantation of the biosphere's wider interiority' (Mueller 2017, 256). And so, this is exactly what Shepherd does – she goes inside. She walks inside clouds (Shepherd [1977] 2014, 17), she bathes naked in the clear waters of the lakes (Ibid., 12), she 'walks through long heather to feel its wetness on [her] naked legs' (Ibid., 97), she feels her way into the growth of stagmoss (Ibid., 58) and she walks barefoot. Even breathing serves as an affirmation of your belongingness – 'I draw life in through the delicate hairs of my nostrils' (Shepherd, 52). By implication she also breathes life out; she shares in the life of the mountain.

Throughout the book, she plays with the idea of a full immersion into a Place where you can freely slip into it, get taken over only to find yourself in its depths. When diving into the ice-cold water it seems 'for a brief moment to disintegrate the very self; it is not to be borne: one is lost: stricken: annihilated. Then life pours back' (Ibid., 104). While asleep on the mountain 'sunk quite so deep into its life,' she feels as if she has let go of herself (Ibid., 91). The phenomenologist David Abrams describes a similar experience as 'a safety that comes from being merely an anonymous part of What Is, from feeling oneself as a clutch of sudden soil and hollow bones with the same wind blowing through them that gust the high ridges. From being in an intimate alliance with the bedrock. It's the weird security of realising that one is a part of something so damned huge' (Abrams 2010, 261). An astonishingly similar sentiment is reflected in Shepherd: 'And after—ceasing to be a stone, to be the soil of the earth, opening eyes that have human cognisance behind them upon what one has been so profoundly a part of. That is all. One has been in' (Shepherd [1977] 2014, 92). This, however, is not to say that 'in Shepherd's writing, absolute loss of self is the desired end' (Walton 2020b, 181), it seems rather to be a way to see oneself as both the subject and object in the world. It is not to walk outside of one's body, but to walk so deeply inside of it that, as Merleau-Ponty writes: 'Inside and outside [become] inseparable. The world is wholly inside and I am wholly outside myself' (Merleau-Ponty [1945] 2002, 717).

Walking in itself is an important aspect of Shepherd's practice. At the end of the book, she herself puts the practice of walking in the centre – it is her 'controlled breathing exercise' (Shepherd [1977] 2014, 106) of the Yogi and it is her meditation. But above all, it is a way of being. Mueller states: 'If phenomenology enacts a way of being in the world that is participatory, then to approach the world phenomenologically means to set oneself in motion,' (Mueller 2017, 128) and that is what *being* seems to mean for Shepherd as well. Walking for her is 'a series of transformative encounters that unite the body, senses and mind' (Walton 2020b, 181). With every step she is affirming her place in the mountain, she is walking deeper into the felt texture, she is *feeling* herself *in*.

Here Nan Shepherd's 'traffic of love', as she herself calls it, becomes love in Spinoza's sense of *Amor Intellectualis Dei* (E5 P33; E5 P35) (Spinoza [1677] 2001, 249-250) which as Næss interprets it is, 'a special kind of intuitive understanding of particular things that involve an internal love

relation' (Næss 2008b, 239). Her relationship to the mountain could be likened to that between Spinoza's God and its modes – each one being a unique expression of the whole (E1 P15) (Spinoza [1677] 2001, 14), or as Shepherd herself has put it in the book: 'life is so many guises' (Shepherd [1977] 2014, 74). And so, her love can only be likened to 'love of one expression directed towards another expression' (Næss 2008b, 240). Shepherds 'living in one sense at a time' is a reflection of the mountain experiencing itself through one of its manifestations (Shepherd [1977] 2014, 106) at a time. It is not a philosophy of reduction. It is rather a philosophy of an inexhaustible pluralism – pluralism of senses just as much as pluralism of material manifestations. Or is it rather like a fractal where each tiniest thing is a reflection of the whole, just as the whole is the reflection of all the innumerable minute entities? Either way 'the universe merely refers you onwards' (Macfarlane 2014, xxiv). Shepherd has affirmed her belongingness to the mountain. She has affirmed the link or the dash that is between a place and person. By being so completely herself, by living so fully in her senses she finally 'Walked out of the body and into the mountain' (Shepherd [1977] 2014, 106). By walking with love and being porous to the mountain, she has made herself the mountain.

References

Shepherd, Nan. 2014. The Living Mountain. Canongate.

Abram, David. 2010. Becoming Animal. New York: Vintage Books.

Emerson, Ralph Waldo. 2003. Nature and Selected Essays. New York: Penguin Group.

Carter, Gillian. 2001. "'Domestic Geography' and the Politics of Scottish Landscape in Nan Shepherd's The Living Mountain". Gender, Place and Culture: A Journal of Feminist Geography, Vol.8, no. 1: 25-36.

Clark, Timothy. 2014. "Phenomenology". In The Oxford Handbook of Ecocriticism, edited by Greg Garrard, 277 - 288. Oxford University Press.

Macfarlane, Robert. 2014. "Introduction". In Nan Shepherd The Living Mountain, vii – xxxiv. Canongate.

Merleau-Ponty, Maurice. 2002. Phenomenology of Perception. Taylor & Francis.

Mueller, Martin Lee. 2017. Being Salmon, Being Human. Vermont Chelsea Green Publishing.

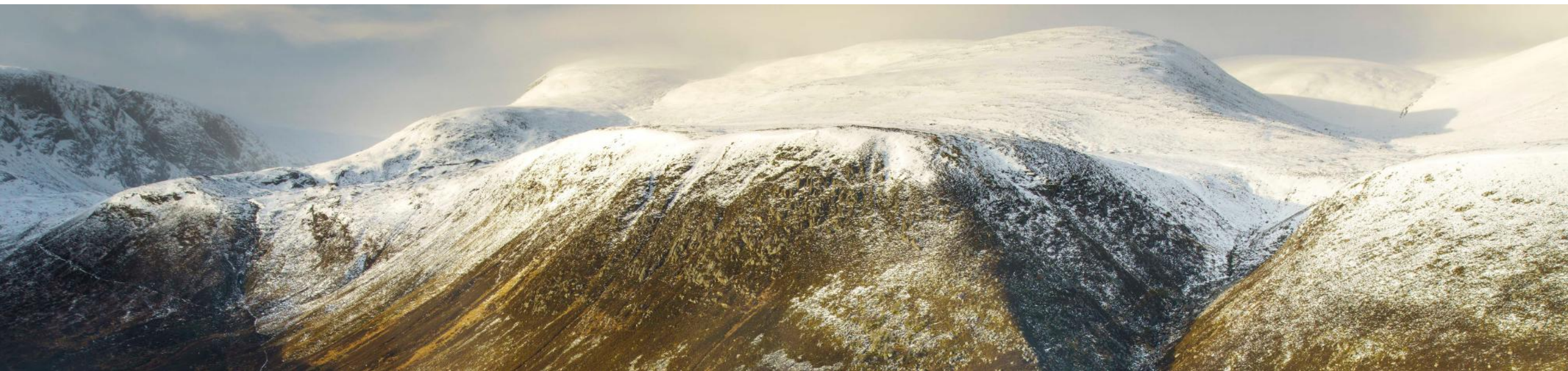
Næss, Arne. 2008a. "An Example of a Place: Tvergastein". In Ecology of Wisdom, edited by Alan Drengson and Bill Devall, 45-64. Great Britain: Penguin Classics.

Næss, Arne. 2008b. "Nonviolence and Gandhi, Spinoza and Wholeness". In Ecology of Wisdom, edited by Alan Drengson and Bill Devall, 207-275. Great Britain: Penguin Classics.

Spinoza, Benedict. 2001. Ethics. Translated by W. H. White. Hertfordshire: Wordsworth Classics of World Literature.

Walton, Samantha. 2020a. "A way in". In The Living World: Nan Shepherd and Environmental Thought, 1-28. London: Bloomsbury Academic.

Walton, Samantha. 2020b. "Being". In The Living World: Nan Shepherd and Environmental Thought, 167-193. London: Bloomsbury Academic.



Nøkken

Words and painting by Helene Kamfjord

Nøkken is a mythological creature in Norse folklore, typically in the shape of a beautiful man or horse. It lives in forest ponds and lures/seduces people into the water to drown them. Nøkken functioned as a cautionary tale to prevent children from playing close to water. Now, we seem to have little need for such stories or lore to keep children safe. Which makes me wonder if we have stopped interacting with nature the way we used to. Hence the little thought at the top of the painting, which translates to "Maybe Nøkken is hibernating/sleeping because we don't play by the water in the forest anymore?".

I've always been very fascinated by the personification of nature's dangerous and mystical qualities within folklore and mythology. To me Nøkken is the embodiment of being more-than-human. Nøkken is a human-like creature, but it is also a metaphor for nature; it is part of tales and folklore (collective consciousness), and has been reproduced in art, poems, and stories - making it part of many historical epochs and, in one way, 'outside of time'.

Painter: Helene Kamfjord
Name: Nøkken
Technique: Acrylic on paper
Year: 2022

KNEE-DEEP IN WATER

In 2022, a new method for building infrastructure across wetlands in Norway was introduced (Statens Vegvesen 2022). It hopes to reduce carbon emissions and further facilitate road development. Is this a sustainable way forward or just a wolf in sheep's clothing?

Words by Bendik Sivertsen

Wetlands come in many shapes and sizes and are home to numerous endemic species, many of whom have their home within distinct ecosystems throughout the wetland's domain. These ecosystems vary both spatially and across several environmental gradients: all the way from the high-altitude, nutrient-poor cloudberry bogs to the nutrient-rich semi-natural fens (Halvorsen et al. 2020).

During the last years, wetlands have been brought into the limelight as biological super systems, both for their ability to support complex ecosystems and their extraordinary capability as carbon sinks. In fact, the species diversity in wetlands are similar to what we find in coral reefs and rainforests (Denny 1994). Additionally, certain types of wetland systems have a very convenient combination of low oxygen saturation and high acidity, causing a hermetic seal that almost completely stops decomposition. The result is that carbon is accumulated and stored as a spongy mat known as peat. This phenomenon is what makes wetlands such an amazing carbon sink. The process of carbon accumulation is mainly driven by a relatively large genus of mosses known as *Sphagnum*, which is dependent on high water saturation and has a higher tolerance for acidic and nutrient poor environments. Norway, with its abundance of nutrient poor areas, is home to 57 species of *Sphagnum*. This includes all but four of the European species, making it the *Sphagnum* capital of Europe.

The main culprits of wetland degradation have historically been humans (Lyngstad 2018). A cheap and often-used method of removing huge areas of unprofitable wetlands has been to drain the areas using dikes. This reduces the water saturation from the wetlands surface and makes it harder for typical wetland species to survive. Increasing the surface distance to the water table in such a way has the potential to drastically change the biodiversity, species composition and carbon sequestration potential in the area (Orsholm and Elenius 2022). In recent years, there has been a surge in wetland restoration and an illegalization of further drainage in relation to forestry. Restoration of such organic soils has proven to be a very effective measure in preserving biodiversity and reducing carbon emissions (Miljødirektoratet 2020). According to the goals of the nature management sectors in Norway, the rate at which wetlands are being downsized must be slowed (Naturstrategi for våtmark 2021). Therefore, it is crucial that sustainable methods for further development are found and subsequently implemented. One such method involves road construction across wetlands. Previous methods relied heavily on draining the wetlands to induce a solid ground state that facilitates equipment access and reduces future road erosion. This was not very sustainable, considering the impact on local wildlife and the carbon emissions from peat degradation. Thus, a new method with a different approach has been put forward. By slowly, over a couple of years, compressing the wetlands using sand and gravel, the carbon rich substance below the road is slowly sealed and turned into a solid base for the road to lay on. This has two main advantages: it removes the need to drain the swamp before starting the project and reduces carbon release drastically. According to the project lead, this method saves 8.000-10.000 tons of CO2 from being released on a stretch of 1 kilometer. This equals a reduction of about 90% compared to the previous method (Statens vegvesen 2022).

The new method may still cause biodiversity loss in several ways. The road itself will need a substrate, which will be void of life. The final compressed road will function as a dam through the landscape, hindering natural waterflow and limiting species dispersal across it. Additionally, nutrient runoff from the road causes an increase in nitrogen levels around it, which might lead to a change in species composition (Müllerová, Vítková and Vítek 2011).

The question then remains: Why is it necessary to build across such a vulnerable and important landscape at all? Any mistake during construction risks exposing the area to the same dangers as the former methods and could cause possible complications, even after successful implementation. The answer is unfortunately tied to human convenience and expansion, which is often prioritized at the cost of other living organisms or environments. Hence, we see why there is a climate crisis to begin with.

This is a trial project that shows a willingness to improve existing methods and care for the environment. Only time will tell if it meets the same pitfalls as other supposedly sustainable solutions, or if this is truly a way forward.

References

Denny, Patrick. 1994. "Biodiversity and wetlands." *Wetlands Ecology and Management* 3(1): 55-611. doi:10.1007/BF00177296.

Halvorsen, Rune, Olav Skarpaas, Anders Bryn, Harald Bratli, Lars Erikstad, Trond Simensen, and Eva Lieungh. 2020. "Towards a systematics of ecodiversity: The EcoSyst framework." *Global Ecology and Biogeography* 29(11): 1887-1906. doi:https://doi.org/10.1111/geb.13164.

Klima- og miljødepartementet. 2021. "Naturstrategi for våtmark." 2021. *Regjeringen*. https://www.regjeringen.no/no/dokumenter/naturstrategi-for-vatmark/id2863261/.

Lyngstad, Anders, Tor Erik Brandrud, Asbjørn Moen, and Dag-Inge Øien. 2018. "Våtmark. Norsk rødliste for naturtyper." Artsdatabanken. Retrieved from https://artsdatabanken.no/Pages/259099/Vaatmark.

Miljødirektoratet. 2020. "Plan for restaurering av våtmark i Norge (2021-2025)." *Miljødirektoratet* Rapport M-1903. https://www.miljodirektoratet.no/publikasjoner/2021/april-2021/plan-for-restaurering-av-vatmark-i-norge-2021-2025/.

Müllerová, Jana, Michaela Vítková, and Ondrej Vítek. 2011. "The impacts of road and walking trails upon adjacent vegetation: Effects of road building materials on species composition in a nutrient poor environment." *Science of The Total Environment* 409(19): 3839-3849. doi:https://doi.org/10.1016/j.scitotenv.2011.06.056.

Orsholm, Johanna, Maria Elenius. 2022. "Effects of hydrology on wetland biodiversity: A literature study and development of hydrological indicators." *Report hyrdologi* No. 22, 2022.

Statens vegvesen. 2022. "Bygger veg på myr med 90 % mindre utslipp." Last modified September 7, 2022. https://www.vegvesen.no/vegprosjekter/europaveg/e6brattasenlien/nyhetsarkiv/bygger-veg-pa-myr-med-mindre-utslipp/.

© Till Daling from here: https://www.pexels.com/nb-no/bilde/anlegg-plante-blomst-norge-12225706/)

from Anthropocene

to “Symbiocene”

Feeling our relations: Ecosomatic practices for living and performance making.

In this era of ecological crisis, extreme exploitation, dangerous sensory deprivation, and acute separation, we are investigating how relatedness, entanglement, and codependency can be not only of theoretical and ethical concern, but can be felt, sensually reclaimed, re-membered through the experience of our bodies, as an emergent poetics of forming and unforming on a damaged earth.

Words by Olive Bieringa

My artistic research questions how tools from dance, choreography and somatics can support our collective evolution in this moment of planetary crisis. This research emerges from my positionality as a long-time collaborator, dancer, choreographer and somatic movement therapist engaged in the embodied practices of experimental and site responsive dance, and somatic movement education.

Ecosomatic practices create the ground from which this research emerges. Ecosomatics is a dynamic approach to living and learning which engages us in embodied practices to bring us into deeper relations with the world in which we live. These practices can support our transformation to move from concern, to care, to action when it comes to the ecological crisis.

Alongside my ecosomatic teaching practice I have created a site responsive performance work titled *Resisting Extinction* with many collaborators in Norway, New Zealand and Sweden including my collaborator of 24 years Otto Ramstad.

Resisting Extinction grapples with a problem that is existential and urgent with an approach I feel is missing in the larger cultural discourse around this crisis. How do we personally and collectively reckon with this ecological crisis with our physical and emotional bodies? Through engaged practice, our bodies help us tangibly realize we are not separate from our surroundings. Together our bodies live inside this ecological crisis.

One goal is to make what is often perceived as a complex, irrelevant, or unconscious body of knowledge more tangible in the public imagination in order to reshape our understanding of our embodied subjectivities. Could this knowledge challenge our perception of self, upending our notion of our "individuality"? If we cannot be understood apart from the social relations we are a part of, should we not consider ourselves "dividuals"? (Deleuze, 1992). As one inseparable from the relations we are a part of, such as all of the micoorganisms who live on, in and with us, do we not also become a complex holobiont (Margulis, 1991) A holobiont is a discrete ecological unit, a host and the many other species living in or around it.

How can we expand our ecosomatic sense of existence to include more relations, more kin, more support? Many ecological species are waiting for us to catch up. We need to understand we are in a deep community. Nature is ready to receive us in solidarity.

These art and embodied practices thrive in, with, through and as symbiotic and mutually reinforcing life-generating processes and forms found in living systems.

Our educational and artistic work involves the creation of environments in which the emergence of a multi-perspectivism, embodied in the singularities of the participants' style and intelligence, can foster collective creation. This is not uncommon in contemporary dance and performance. It is how new practices and new work are generated. The poetics of dance allows us to approach learning as a practice of play, with our materiality, others, and our environment.

Somatic practice can open the door to radically inclusive movement potentials. Somatic practices engage our body awareness (proprioception, interoception, exteroception) to support connections between our unconscious and conscious, and as a result open transformative pathways for moving, acting, thinking, and living. Through mindful physical exploration and gentle stimulation of the body through touch, sound and movement we learn to sense and initiate movement from anywhere inside of ourselves. The embodied approach of somatics offers ranges of experiential knowledge that in many cases the natural sciences have little access to. Somatic thinking can help us perceive more of the whole scale of the sensitivities and intelligences within us, the human and non-human, the before and after, and the transforming spaces.

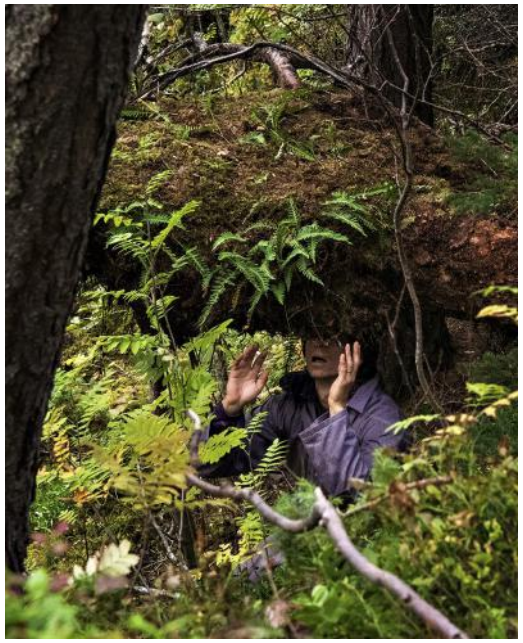
The practices we share draw from the encyclopedic somatic work of Bonnie Bainbridge Cohen's Body-Mind Centering, our site-responsive and experiential dance practices, and ecology to create deep relational practices that allow participants to move along a lemniscate - a deep

investigation of our internal and external worlds.

We use choreography as an expanded practice, a research strategy, a way of transducing information between different disciplines, and a way of organizing the research outcomes. We create choreographies that function as a swarming of collective agencies and an orchestration of encounters and dialogues. This process involves a transfer, a displacement, from the intimacy of a studio environment, where somatic states are usually practiced and explored, to a 'public space' of participatory experience, where questions are exposed and research can expand.

Our *Ecosomatic practices for living and dying on a damaged earth* workshops take place on site in different landscapes and in an online format. In this workshop we offer practices for living and dying together on a damaged earth. Together we practice living, breathing, sensing, perceiving, digesting, dying, and decomposing to help us perceive more of the whole scale of the sensitivities and intelligences within us, the human and non-human, the transforming spaces, the before and after. We share embodied practices to repair our relational fields. We hone our skills, to improvise, to play, to experiment, to be receptive, to be in the unknown and trust we have the resources in our bodies to negotiate, survive, and thrive (Bieringa, 2022).

Our performance *Resisting Extinction* offers practices for living and dying together on a damaged earth. *The performance* invites us to not only look forward but to look around and notice what we are losing. Together our bodies live inside this ecological crisis. This ecological crisis is an identity crisis. Everything is shifting. Recognizing grief as a legitimate response to this multi-species mass extinction is a vital step to expanding our understanding of what it means to be alive in this swiftly transforming moment. We can't rely on models that perpetuate this crisis. We need to practice embodied knowing to repair our relational field. We must hone our skills. To improvise, to play, to experiment, to be receptive, to be in the unknown and trust we have the resources in our bodies to negotiate, survive, and thrive (Bieringa, 2023).



We began work on *Resisting Extinction* in April 2020, early in the pandemic in a 1000 year old Limerich Linden forest along the fjord in Bygdøy, Oslo.

The work has been performed in Kongsgaard, Bygdøy, nearby on Kalvøya presented by Bærum Kulturhus, in the snow covered urban spaces of Hammerfest for DanseFestival Barents, in the trees and seaweed in Ladakia, Trondheim presented by DansiT and Rosendal Theater, with vipers in Talluden, Stockholm presented by SITE Sweden and in a regenerating urban Central Park in Wllington, New Zealand for the Performance Arcade. Grieving practices have been installed as audio installations in exhibitions and delivered as livestream performances for various festivals. The work will travel to Tallin, Estonia in partnership with Taantsuruum in May 2023. This work has been created in collaboration with performers Maria Lothe, Sigrid Marie Kittelsaa Vesaas, Ornilia Ubisse, Hanna Filomen Mjåvatn, Kristina Gjems, Nina Wollny, Daniel Perrson, Oliver Connew, Uma Ramstad, Laressa Dickey, Otto Ramstad, Kosta Bogoievski, Josie Archer, Rachel Ruckstuhl-Mann, Olivia McGregor, and Amit Noy.

Resisting Extinction unfolds as a series of three experiences: *weather walk, the missing, and dying and decomposing meditations* (Bieringa, 2023).

Weather walk unfolds as one-on-one performance journeys through the landscape which transforms our small talk about the weather into meaningful talk about the climate crisis. The weather is a place for encountering others. It entangles us. The weather invites us to improvise. How we talk about the weather is defined by where we grew up and where we live now. The lightness of discussing the weather does not contradict the depth. To talk about the weather is to speak of vulnerability, privilege, disaster, and to engage in complexity. To dance inside of the weather acknowledges that we are not separate. Every breath we take is entangled with the weather and other beings. We are in an ongoing dance with the weather, of affecting and being affected. Our microbiome forms its own weather. To talk of our microbiome is to discuss how we are constantly merging with other systems in the larger environment. We are embedded beings. We are porous beings. Porous beings whose kidneys are born from the energy of our ancestors. regulate our water-salt balance and our fear. We are pandemic beings. We are evolutionary beings. A dancing body provides new ways of coming into a relationship with the landscape and other beings, revitalizing our perception of what is possible. As we walk together, we utilize tools from dance, somatics, philosophy, climate science, biology and ecology to open the felt sense and perceptual opportunities to support embodied relatedness and perceive our embeddedness within these larger systems. Weather walk is an invitation to alert ourselves to our habits. This is not an exercise in aesthetics. It is an invitation to enter an immersive practice and potential state of falling into awe. *Weather walk* attempts to rupture time and scale. A destabilizing that frees us from captivity. Together we fumble in the darkness.

"I notice that I am receptive to this way of re-learning knowledge about nature, like an extended science lesson where I get to feel my body... In this way, the performance activates a co-responsibility that makes me receptive to tools and knowledge that I do not already have."

Marte Reithaug Sterud, Norsk Shakespeare Tidsskrif

"It is an horrifically beautiful thought experiment"

Lyne Pringle, Theatreview

The missing is an invisible performance that flickers on the periphery of our consciousness where the landscape comes alive,haunted by critically endangered multi-species beings. The audience is informed of some of the endangered and extinct beings of this specific place and invited to wander, to spend time with what is seen, unseen, present and missing. The experience highlights a relational field rather than a single spectacular figure/dancer/object. Some audiences explore, follow the moving landscape, some take a rest in one place and listen, some spend time talking with the fungi and foxes.

Finally, the group gathers for *a dying and decomposing meditation. "We don't know exactly what is going to happen but we can invent some possible scenarios to practice with".* The audience is invited to decide how they would like to practice dying; of thirst due to heatwaves, fires and a lack of clean water, freezing to death with no access to warm shelter, or drowning in a flood or storm surge. Once decided they are guided through a somaticization, a physiological journey of dying and decomposing into the land or sea. As our bodies rupture our native microbial communities are replaced by microbes in the air, the soil and sea. An invocation to all the organisms that help our transition.

Recognizing grief as a legitimate response to this multi-species mass extinction is a vital step to expand our understanding of what it means to be alive in this swiftly transforming moment. These intimate communal events create space to grieve for humans, animals, plants, land, values or belief systems that we are losing. To grieve requires us to make these extinctions and losses personal. Together we are researching ways of grieving for what is changing and what we are losing. How should we grieve our own extinction?

Unfolding from this work we have created a series of *Resisting Extinction mind-mapping experiments in 2022*, initially presented as part of UTE by Bærum Kulturhus in Bekkestua and Sandvika, Norway. A group of performers gather to create a large-scale mind-map in urban public space in red chalk, a mapping of materials and thinking processes unfolding from *Resisting Extinction*. This map creates a space of images

and ideas and questions in which we dance alone, together, sometimes as *the missing* obscured under fur. Porous bodies – symbiotic beings – microbiome, lichen - bacteria – water – oil - walrus – who is missing? How are you resisting extinction?

This writing is part of Olive's doctoral research "Becoming/Extinct: Forming and Unforming on a Damaged Earth" at the UniArts, Helsinki.

References

Deleuze, Gilles. 1992. "Postscript of Modern Society'.

Margulis, Dr. Lynn. 1991. "Symbiosis as a Source of Evolutionary Innovation".

Bieringa, Olive. 2022. "Ecosomatic practices for living and dying on a damaged earth." https://bodycartography.org/portfolio/ecosomatics-classroom/

Bieringa, Olive. 2023. "Resisting Extinction." http://resistingextinction.org/

POSTHUMANISME OG PSYKISK HELSE

Psykologi som fag og profesjon er preget av en problematisk antroposentrisme, hvor den ikke-menneskelige naturen tillegges liten eller ingen vekt. I denne artikkelen gir jeg en fremstilling av posthumanistisk teori, og diskuterer hvordan slike perspektiv kan brukes til å utfordre grunnleggende premisser i psykologien. Jeg drøfter et forsøk på et posthumanistisk blikk på psykisk helse, og peker på det potensielt problematiske i å bryte ned skiller mellom menneske og natur.

Words by Magnus Hole Fjetland

Innledning

Flere hendelser gjorde 1972 til et viktig år for miljø og klima, blant annet rapporten *The Limits to Growth* og FNs første miljøkonferanse i Stockholm. Det skulle også bli et begivenhetsrikt år for psykologien, med tre publikasjoner som rokket ved grunnleggende forestillinger i faget. I artikkelen *Unconscious processes in relation to the environmental crisis,* publisert av Harold Searles, ble psykoanalytikere oppfordret til å ta i bruk sin teoretiske og kliniske ekspertise i møte med datidens økologiske krise. Artikkelen bygger videre på boka *The Non-Human Environment in Normal Development and in Schizophrenia* (Searles, 1960). Her skisserer Searles en utviklingspsykologi hvor det ikke-menneskelige miljøet, som omfatter både naturen og menneskeskapte objekter, spiller en avgjørende rolle både i normal og patologisk menneskelig utvikling. Samme år ga systemteoretiker Gregory Bateson ut en mye sitert artikkel, hvor han peker på sammenhengen mellom "galskap" og det å dumpe avfall i innsjøen Lake Erie: "You forget that the eco-mental system called Lake Erie is a part of your wider eco-mental system - and that if Lake Erie is driven insane, its insanity is incorporated in the larger system of your thought and experience" (Bateson, 1972, s. 492). Det var også dette året Gilles Deleuze og Felix Guattari publiserte *L'anti-Œdipe* (1972), sin ramsalte kritikk av psykoanalyse og kapitalisme. Sammen med oppfølgeren *Mille plateaux* (1980) utfordret den blant annet måten vi forestiller oss forholdet mellom psyke, samfunn og natur på, som er sentrale momenter i posthumanistisk teori.

Dette engasjementet døde derimot tilsynelatende hen, og psykologi som fag og profesjon mangler i dag et utpreget klima- og miljøengasjement. Psykologi er «([...] studiet av atferd og mentale prosesser» (Teigen, 2022), med antroposentrisme som sitt definitive, om enn ofte uuttalte, premiss. Mennesket står i sentrum i psykologien, og det ikke-menneskelige miljøet spiller liten rolle i utviklingen og opprettholdelse av psykologiske prosesser. Det finnes imidlertid unntak: særlig økopsykologien har vært opptatt av å utfordre antroposentrisme gjennom å gjenopprette kontakt mellom menneske og natur (se for eksempel Fisher, 2013), og psykoanalytiske perspektiver har diskutert menneske-natur-forholdet (blant annet Brennan 2000, Lertzman 2015, Vetlesen 2015, Weintrobe 2021). Anerkjennelse av naturens rolle kan likevel ikke sies å være en del av mainstream psykologi.

I kjølvannet av forslaget om at vi nå har gått over i Antropocen (Crutzen, 2002), har posthumanistisk teori bidratt til å utfordre tradisjonell tenkning om forholdet mellom menneske og miljø – dette på lignende måter som Searles, Bateson, Deleuze og Guattari. Til tross for innflytelse innenfor humaniora og andre samfunnsvitenskaper er slike perspektiver derimot mindre kjent innenfor psykologien. I denne artikkelen skal jeg forsøke å gi en fremstilling av posthumanistisk teori, og diskutere hvorvidt det er mulig å tenke med denne retningen for å problematisere antroposentrisme i psykologi. Mer spesifikt vil jeg trekke frem en utvidet forståelse av psykisk helse-begrepet (McPhie, 2019), som innlemmer det ikke-menneskelige miljøet i det som vanligvis anses som menneskelige mentale prosesser.

Posthumanisme og en utvidet forståelse av agens

Posthumanisme er et ullent begrep som unndrar seg enkle definisjoner. Delvis overlapper begrepet med felt som (feministisk) nymaterialisme, objekt-orientert ontologi, affekt-teori og kritiske dyrestudier for å nevne noen. Posthumanistisk teori legger som oftest en eksplisitt eller implisitt antroposentrisme-kritikk til grunn, hvor oppmerksomheten rettes mot det ikke-menneskelige eller mer-enn-menneskelige – altså det som tradisjonelt sett ikke har vært regnet som legitime studieobjekter i samfunnsfag og humaniora. Etablerte skiller mellom natur og kultur trekkes i tvil, et menneske-sentrert agensbegrep kritiseres, og materien trer frem som relevant. Som jeg skal komme tilbake til senere er dette spørsmål som også er relevante for psykologisk teori.

Filosofen Gilles Deleuze har, som nevnt i innledningen, vært særlig innflytelsesrik innenfor denne tradisjonen. Deleuze kritiserer tenkning som vektlegger vedvarende og stabile identiteter, til fordel for prosesser og det *forskjellige* (May, 2005, s. 19). Særlig bøkene *Anti-Ødipus* (2002 [1972]) og *Tusen platåer* (2002 [1980]), som er skrevet sammen med aktivisten og psykoanalytikeren Felix Guattari, har påvirket posthumanistisk tenkning. Begge er kjent for å

være teoretisk omfattende og vanskelig tilgjengelige, blant annet på grunn av et høyt abstraksjonsnivå og referanser til en rekke ulike disipliner på tvers av humaniora, samfunns- og naturvitenskap. Førstnevnte er en kritikk mot det påstått autoritære og patriarkalske i tradisjonell psykoanalyse, som på den tiden var det dominerende paradigmet innenfor psykiatrien. Som alternativ ser Deleuze og Guattari begjær som noe prosessuelt og frigjørende som fremmer sammenkoblinger på tvers av etablerte forestillinger om hva som utgjør del og helhet, jeg og ikke-jeg, natur og kultur (Deleuze & Guattari, 2002). I oppfølgeren *Tusen platåer* (2004) bruker Deleuze og Guattari metaforer fra blant annet biologi og økologi for å kritisere tenkning som vektlegger atskilte og stabile enheter. Alternativet til dette er å anse for eksempel samfunnsmessige fenomen som sammenkoblinger ("assemblage") med elementer både fra natur og kultur, som prosesser i kontinuerlig "tilblivelse" ("becoming"). Et eksempel på en slik metafor er *rhizom*, en type rot som i følge forfatterne illustrerer heterogenitet og forbindelse mellom ulike komponenter ved at "any point of a rhizome can be connected to anything other, and must be" (2004, s. 7). Inspirert av Batesons tanker om et "økomentalt system" (1972) foreslår Guattari (2008) i sin «økosofi» tre økologiske og gjensidig konstituerende system av sinn, samfunn og natur. Slik blir ødeleggelse av naturen knyttet til psykisk helse.

Nylig avdøde Bruno Latour foreslår med sin aktør-nettverksteori en «gjenoppbyging av det sosiale» (Latour, 2005). Her gis materielle, ikke-menneskelige gjenstander status som «aktør» med tilhørende agens, og slik utvides dermed samfunnsvitenskapenes interesseområder (Latour, 2005). Ifølge Latour tvinger Antropocen oss til å sette spørsmålstegn ved natur/kultur-skillet, og dermed tanken om agens som noe unikt menneskelig. Dette aktualiseres ved at jordkloden nå er en «aktiv» part som rammer menneskeheten med sine naturkatastrofer, mens menneskene på sin side reagerer med passivitet og handlingslammelse overfor klimaendringene (Latour, 2017, s. 73-74).

Å gi materien oppmerksomhet er en sentral del av Jane Bennetts prosjekt i boken *Vibrant Matter* (2010). Bennett ser menneskets destruktive innvirkning på jordkloden som en konsekvens av moderne forestillinger om materie som noe dødt eller instrumentalisert (Bennett, 2010, ix). Det alternative prosjektet blir dermed en «ny» type vital materialisme som fremstiller «[...] human and nonhuman actants on a less vertical plane» (ibid.). Karen Barad (2007) trekker veksel på tidlig kvantemekanikk i sin «agentiale realisme», og argumenterer for en gjensidig konstituerende prosess i vitenskapelige instrumenters møte med verden, slik at agens først oppstår i møter mellom subjekter. Dette kaller hun "intra-aksjon", for å skille slike prosesser fra tradisjonelle forestillinger om interaksjon mellom avgrensede aktører.

Videre har Donna Haraway problematisert skillet mellom menneske og teknologi, og natur og kultur. Med utgangspunkt i forholdet til sin hund Cayenne Pepper foreslår hun begrepet "natureculture" for å poengtere det problematiske i det binære skillet mellom det kulturelle og det naturlige (Haraway, 2016). Vi blir oss selv i møte med det hun kaller "signifikant annerledeshet" ("significant otherness"), for eksempel i slike møter mellom menneske og hund. Arter møtes på denne måten i en uavsluttet og pågående prosess, som "med-tilblivelser" ("co-becomings"). Enkelte av disse artene har utviklet seg i samspill med mennesket i flere tusen år, og kan vanskelig klassifiseres som hverken "kultur" eller "natur".

Samlet sett ser vi her flere berøringspunkter med psykologien, ettersom posthumanistisk teori utfordrer etablerte forestillinger om det psykologien tradisjonelt sett studerer, nemlig atferd og mentale prosesser. Dette har potensielle implikasjoner for flere områder av fagfeltet, for eksempel utviklings- eller sosialpsykologi, men også for den kliniske psykologien og hvordan vi tenker om *psykisk helse*.

Psykisk helse i Antropocen

Hvordan kan så en posthumanistisk psykologi se ut? Et sted å starte er en posthumanistisk lesning av begrepet psykisk helse. Dette er sentralt i boka *Mental Health and Wellbeing in the Anthropocene: A Posthuman Inquiry* (McPhie, 2019). Inspirert av Deleuze og Guattari, hevder han at vi ikke nødvendigvis kan skille klimaendringer og naturtap "der ute" fra enkeltmenneskets psykiske helse "her inne" (McPhie 2019). I stedet for å opprettholde binære skiller mellom det indre og det ytre, mellom det

kunstige og det naturlige, mellom det reelle og det konseptuelle, bør vi se slike tilsynelatende motsetninger som komplementære. Mennesker er del av kontinuerlige tilblivelses- og sammenkoblingsprosesser i verden, uten klare skiller mellom intra-psykiske og fysiske prosesser. Vi bør tenke «økologisk» om psykisk helse og velvære, slik at klimatiske og geologiske endringer i Antropocen blir en del av disse prosessene. Slik blir psykisk helse en «transkranial» prosess som er «spredt» i miljøet, noe begrepet «(environ)mental health» henspiller på. Med andre ord er psykisk helse noe som omfatter både psykologiske, økologiske og geologiske prosesser. Dette er i strid med dualistiske oppfatninger som skiller mellom fysisk og mental helse – altså mellom kropp og sinn – og som anser dette som objektive og kvantifiserbare størrelser.

Med dette blir menneskeskapte klimaendringer og naturtap ikke bare ytre hendelser som potensielt kan påvirke individets psykiske helse. Snarere bør ødeleggelse av den «ytre» naturen anses som en type psykisk lidelse. På samme måte som Gregory Bateson (1972) beskrev forurensning som en type galskap, hevder McPhie at vi bør anse økocid som et psykologisk problem – nettopp fordi det mentale og det miljømessige er uløselig knyttet til hverandre. Samtidig bør vi ikke operere med klare skiller mellom kultur og natur: McPhie advarer mot å idealisere naturen som noe "grønt" og "friskt", som har potensial til å helbrede mennesker bare vi gjenoppnår kontakten med den. Snarere enn en idealisert natur "der ute" beskrives "natur" som en kategori som kan omfatte alt fra knokler til plastikk. Masseutryddelse av arter blir for eksempel ikke noe som utelukkende er forårsaket av mennesker, ettersom det posthumanistiske perspektivet ser mennesker som «[...] not a transcendent or biologically bounded entity [ ] distinct from the intra-actions of other life processes» (McPhie, 2019, s. 9).

Her ser vi altså hvordan viktige komponenter i posthumanistisk tenkning kommer til syne. Det å "spre" psykisk helse i miljøet tar utgangspunkt i kritikk av antroposentrisme, samtidig som skillet mellom natur og kultur brytes ned. Agensbegrepet utvides til også å omfatte det ikke-menneskelige, og anses som noe som skjer i samhandling med andre "livsprosesser". Men en slik utvidet forståelse er ikke uproblematisk.

Kritikk av posthumanistiske perspektiver

En nylig utkommet artikkelsamling om kritisk teori og nymaterialisme peker på sentrale spenninger i diskusjonen om posthumanisme:

«[..] those working in the field of Critical Theory often appear to the advocates of New Materialism as too much caught up within an anthropocentric and language-based perspective, whereas the latter are frequently seen by the former as too readily abandoning important distinctions between human and non-human nature, being and appearance, epistemology and ontology» (Rosa, Henning og Bueno, 2022).

En kritikk av posthumanistiske perspektiver er dermed at de i sin antroposentrisme-kritikk «kaster barnet ut med badevannet» når de kvitter seg med distinksjoner som er viktige for å forstå forholdet mellom menneske og natur. I denne sammenhengen er det særlig relevant å peke på det problematiske ved å gå bort fra skillet mellom menneskelig og ikke-menneskelig natur.

I boka *The Progress of This Storm* (2018) kritiserer Andreas Malm de etiske og politiske implikasjonene av posthumanismens utvidelse av agens-begrepet. Vi trenger, ifølge Malm, et «antroposentrisk» agens-begrep for å fordele skylden for klimaendringene, og det er kun gjennom å opprettholde et skille mellom samfunn og natur at det blir mulig å peke på fossilkapitalismen som årsaken bak den økologiske krisen. En adekvat samfunnsvitenskapelig analyse og kilde til politisk motstand vil ikke være mulig med utgangspunkt i en «flat», posthumanistisk ontologi, fordi det blir umulig å ansvarliggjøre for eksempel oljenæringen. Det må med andre ord komme klart frem hvem som har ansvaret for klimaendringene, noe begreper som "intra-aksjon" vanskeliggjør. Malm er også kjent for sin kritikk av antropocen-begrepet, og anvender snarere "kapitalocen" for å understreke kapitalismen som drivkraft bak naturødeleggelse og klimaendringer (Malm & Hornborg, 2014). Arne Johan Vetlesen (2019) fører en lignende kritikk som Malm når han kritiserer posthumanistisk teori slik den er for-

mulert av Latour og Barad for å overse forskjellene mellom menneskelig og ikke-menneskelig natur. Det vi står overfor i Antropocen handler nettopp om et menneskeskapt, pågående og forestående tap av slik annerledeshet. En "flat" posthumanistisk ontologi makter derimot ikke å fange opp disse viktige forskjellene. Her er det også verdt å nevne økofeministen Val Plumwood (1993), som argumenter for at vi i møte med natur må balansere både det som er felles, og det som er ulikt. Å overse det som er annerledes, altså ved å fremme en tanke om en enhet mellom det menneskelige subjektet og naturen, innebærer en type dominans – en «inkorporering». Selv om Plumwood utformet dette som en kritikk av dypøkologi, ser det også ut til å kunne treffe posthumanstisk teori slik den er skissert her.

Posthumanistisk psykisk helse

Et posthumanistisk blikk på psykisk helse innebærer altså en radikal omformulering av hva som anses som relevant for psykologisk teori. Dette skjer fordi det vi tradisjonelt sett regner som «natur», men også andre ikke-levende ting, kan konstituere menneskers psyke. At klimaendringer og naturtap kan føre til psykisk uhelse er ukontroversielt, men å karakterisere ødeleggelse av natur som "galskap" går mye lenger og er en kraftfull oppfordring til psykologer om å engasjere seg i disse spørsmålene, både i teori og i praksis.

Med tanke på diskusjonen ovenfor melder det seg flere teoretiske problemer. Dersom vi gjør psykologien «flat», altså dersom vi ser mentale prosesser til å inngå i en «mental økologi» som er spredt i både det menneskelige og det ikke-menneskelige miljøet, kan dette innebære nettopp å kaste barnet ut med badevannet. Uten skiller mellom menneskelig og ikke-menneskelig natur blir det for eksempel vanskelig å beskrive menneskers fenomenologiske erfaringer i møte med natur, eller de unikt menneskelige psykologiske reaksjonene på klimaendringer og naturtap. Dersom vi ikke kan skille mellom «naturlige» livsprosesser i dyr, sopp og planter på den ene siden og materialer frembrakt av mennesker på den andre, kan dette bikke over i en ny type antroposentrisme. Med andre ord kan det være nyttig og nødvendig å insistere på skillet mellom menneske og natur, slik at vi igjen kan belyse den unike rollen naturen spiller i å konstituere psyken vår, blant annet som et møte med noe signifikant annerledes utenfor oss selv. For at slike psykologisk sett meningsfulle møter med «natur» skal kunne finne sted, kreves det kanskje skiller mellom kultur(er) og natur(er), og mellom et indre og et ytre. Dette er skiller som i et posthumanistisk perspektiv anses som problematiske og antroposentriske. I tillegg kommer det ovennevnte politisk sett problematiske ved å utvide agens i en «mental økologi», nemlig at det kan gjøre det vanskeligere å ansvarliggjøre enkeltmennesker og bestemte organisasjoner for å ha forårsaket klimaendringene, eller å kjempe mot menneskedrevet nedbygging av naturen.

Også andre relevante psykologiske fenomen forutsetter kanskje et klart skille mellom menneske/natur og indre/ytre. Dersom destruktivitet er noe som oppstår i møte med noe utenfor oss selv, og noe som er særegent for mennesker (Fromm, 1973), trenger vi skillet indre/ytre og menneske/ikke-menneske for å beskrive stor-skala ødeleggelse av naturen. I tillegg er menneskelige psykologiske prosesser situert i et økonomisk system som beror på tingliggjøring av natur (Brennan, 2000), og kjernen i kapitalocen-kritikken av antropocen-begrepet er at det overser kapitalisme som drivkraft bak klimaendringer og naturødeleggelse. I forlengelse av dette blir det et spørsmål om hvorvidt oppheving av natur-kultur-skillet i (environ)mental health-begrepet umuliggjør en psykologisk-fundert kapitalisme-kritikk. Sagt med andre ord: en kritikk av hvordan det menneskeskapte økonomiske systemet begrenser muligheten for nettopp slike transformative møter med det ikke-menneskelige.

En slik utvisking av forskjeller er derimot ikke nødvendigvis noe som kjennetegner all posthumanistisk teori. Særlig Haraways perspektiv er relevant her, som nettopp peker på hvordan mennesker blir seg selv i møte med "signifikant annerledeshet" i en pågående prosess. Disse "naturkulturene" jobber jo til og med i enkelte deler av psykisk helsevern som terapi-dyr, og fyller uten tvil viktige roller for pasientene som møter dem. Det er derimot et spørsmål om betydningen av slike møter også går tapt i en beskrivelse av "psykisk helse" som noe som omfatter både psykologi, økologi og geologi – som (environ)mental health. På den andre siden er dette

også tilfeller som vanskelig lar seg beskrive med tradisjonell psykologisk terminologi.

En uavsluttet dialog

Utgangspunktet for denne teksten er at de teoretiske utfordringene fra Searles, Bateson, Deleuze og Guattari fortsatt står seg. Mentale prosesser "her inne" kan ikke beskrives uavhengig av miljøet "der ute", og teoretisk sett er det problematisk å utelate natur og kun forklare psykologiske prosesser som intra-psykiske og mellom-menneskelige. I tillegg finnes det paralleller mellom hvordan vi forestiller oss agens utenfor mennesket og hvordan vi behandler den mer-enn-menneskelige naturen. Dersom miljøet ikke anses som relevant for psykologisk teori, er det kanskje derfor ikke overraskende om psykologer i mindre grad engasjerer seg politisk i slike spørsmål.

Posthumanistisk teori går langt i å utfordre antroposentrisme, og som jeg har vist her er slike perspektiver også relevante for psykologi. Vi trenger en utvidet forståelse av psykologien generelt og psykisk helse spesielt. Dette både for å motivere psykologi i kampen for å begrense klimaendringene og motvirke ødeleggelsen av naturen, men også for å unngå en reduksjonistisk forståelse av atferd og mentale prosesser. En slik forståelse er derimot vanskelig å utarbeide på en måte som ivaretar både kontinuitet og forskjell mellom den menneskelige og ikke-menneskelige naturen.

I denne artikkelen har jeg pekt på det problematiske ved å beskrive psykisk helse som "(environ)mental health", men posthumanistisk teori, slik den er beskrevet her, rokker ved flere av psykologiens grunnleggende premisser, og er slik sett et godt utgangspunkt for videre diskusjon.

References

Barad, K. (2007). Meeting the universe halfway: quantum physics and the entanglement of matter and meaning (pp. XIII, 524). Duke University Press.

Bateson, G. (1972). Steps to an ecology of mind (Ballantine psychology). New York: Ballantine Books.

Bennett, J. (2010). Vibrant matter: a political ecology of things (pp. XXII, 176). Duke University Press.

Brennan. (2000). Exhausting modernity: grounds for a new economy (pp. VIII, 216). Routledge.

Crutzen. (2002). Geology of mankind. Nature (London), 415(6867), 23–23. https://doi.org/10.1038/415023a

Deleuze, G., & Guattari, F. (2002). Anti-Ødipus: kapitalisme og schizofreni (K. Stene- Johansen Overs.) (p. 494). Spartacus.

Deleuze, & Guattari, F. (2004). A thousand plateaus: capitalism and schizophrenia (B. Massumi Overs.) (pp. xxi, 688). Continuum.

Fisher. (2013). Radical ecopsychology : psychology in the service of life (2nd ed., pp. XXII, 385). State University of New York Press.

Fromm. (1973). The anatomy of human destructiveness (pp. XVI, 521). Holt, Rinehart and Winston.

Guattari, F. (2008). The three ecologies (I. Pindar & P. Sutton Overs.) (pp. XIII, 115). Continuum.

Haraway, D. (2016). Manifestly Haraway (Vol. 37, pp. XIII, 336). University of Minnesota Press.

Latour, B. (2017). Facing Gaia: eight lectures on the new climatic regime (C. Porter Overs.) (pp. VII, 327). Polity Press.

Latour, B. (2005). Reassembling the social: an introduction to actor-network-theory (pp. X, 301). Oxford University Press.

Lertzman, R. (2015). Environmental Melancholia. Psychoanalytic dimensions of engagement. Routledge.

Malm, A. (2018). The progress of this storm: nature and society in a warming world (p. 248). Verso.

Malm, & Hornborg, A. (2014). The geology of mankind? A critique of the Anthropocene narrative. The Anthropocene Review, 1(1), 62–69. https://doi.org/10.1177/2053019613516291

May, T. (2005). Gilles Deleuze: an introduction. Cambridge University Press.

Mcphie, J. (2019). Mental health and wellbeing in the Anthropocene: a posthuman inquiry

(1st ed. 2019.). Springer Singapore : Imprint: Palgrave Macmillan.

Teigen, K. H. (2022). Psykologi i Store norske leksikon på snl.no. Hentet 30. mai 2022 fra https://snl.no/psykologi

Plumwood, V. (1993). Feminism and the mastery of nature. Routledge.

Rosa, H., Henning, C., & Bueno, A. (2021). Introduction. Critical Theory and New Materialisms – fit, strain or contradiction? i: Critical Theory and New Materialisms. Taylor & Francis Group.

Searles, H. 1972. Unconscious processes in relation to the environmental crisis. Psychoanalytic Review 59: 361–374.

Searles, H. 1960. The nonhuman environment in normal development and in schizophrenia. New York: International Universities Press.

Vetlesen, A. J. (2019). Cosmologies of the Anthropocene : panpsychism, animism, and the limits of posthumanism (1 [edition].). Routledge.

Vetlesen, A. J. (2015). The denial of nature: environmental philosophy in the era of global capitalism (pp. XI, 223). Routledge.

Weintrobe, S. (2021). Psychological Roots of the Climate Crisis. Neoliberal Exceptionalism and the Culture of Uncare. Bloomsbury Academic.

Feykja and Malin

Words and painting by Helene Kamfjord

My friend Malin with her friend and companion Feykja. They have known each other for many years, teamed up for multiple competitions, and been there during important parts of each other's lives. Malin was there when Feykja was sick while pregnant with her first child, and Feykja has been a support to Malin during her ups and downs at university. I have always really loved this photo of them - because it captures their love, their bond, and the warmth of more-than human relationships.

Painter: Helene Kamfjord
Name: Feykja and Malin
Technique: Watercolor on paper
Year: 2022

Words by Mikayla Marazzi

DEAR JUDY

I AM WRITING TO YOU BECAUSE OF THE HUMANS.

I AM, OF COURSE, ONE OF THE HUMANS. I PARTICIPATE IN 21ST CENTURY HUMAN LIFE: CITY-APARTMENT, LAPTOP-JOB, UNIVERSITY-EDUCATION, IKEA-BEDFRAME, MICROWAVED-DINNER, PET-OWNERSHIP. I STUDY AT AN INSTITUTION CREATED BY HUMANS. I SIT IN A CLASSROOM BUILT BY HUMANS TO PONDER BEING HUMAN AND HOW HUMAN PROGRESS HAS BROUGHT EXTRAORDINARY SUFFERING TO NON-HUMANS LIKE YOU.

At home, I study you. Coiled up on the scratchy wool blanket. Darting around the kitchen in pursuit of a bumble bee. Jumping into open boxes and grocery bags. Hunter and house cat. Wild and tame. Other and familiar.

I talk to you. You talk back.

Sometimes I wake up to your paw swatting at my nose. *Tap-tap*.

I once read that cats meow more around humans than around each other (Bradshaw 2016, 120).

Meowing is the melody of domestication.

Ownership

I am your human. I provide the correct ingredients for modern cat ownership: water bowl, daily meals, litter box, poop scooping, treats after a long walk. In this recipe, the mechanics of your existence are in my hands.

"We do not own her; we care for her and do life with her," a partner used to say about our dog. I adored him when he said this. I tucked this language in my pocket and carried it with me. I avoid all dialects of "ownership" when I talk about you.

Companionship

I must admit that we found each other when I was lonely.

On a humid afternoon in May, I left work early to visit the Humane Society. It was a soul-mission. I had spent the morning color coding Excel documents, listening to a journalist narrate her heartbreak after a ten-year marriage. Just three months ago, I had said goodbye to my closest companions: my partner and our dog. My heart was tender to the touch.

I walked in timidly and asked to see the dogs. While I waited, I crouched beside the cat cage. There you were, big eyed and bright orange, bumping your pink nose against my fingertip.

I met a few dogs that afternoon. A Pitbull Terrier named *Baby Girl*, a Black Labrador with wrinkles and thick paws, a Boxer that jumped extraordinarily high. Your big eyes watched the whole time.

I was more interested in dogs than cats, but I was also interested in moving across the ocean. You, small and simple, began as a strategic second place.

How little I knew of the complexities and joy of loving a cat.

I turned to the person attending the front-desk, whose appearance delightfully refused the gender conformity, and asked whether they allowed trial periods. "You can take her home today!" they gestured towards you. And ten minutes later, they had put you in a cardboard box and I carried you home.

You accompanied me through those early days of grief. You became my *Felis Catus*, or my "companion cat"

as the animal behavior scientists call you (Pongrácz and Szapu 2018).

The same scientists concluded that the *Felis Catus*-human relationship resembles familial bonds: emotional understanding, empathic behavior, communication signals, and high mental capacity (Pongrácz and Szapu 2018, 64). I am 27 years old: partner-less, child-less, home-less. With you, I am creating the definition of *my family*.

Anthropocentrism

I did not grow up with pets. Animals were flashes of color across my childhood:

> White feathers scattered across the yard
>
> (our week-old chickens eaten by coyotes).
>
> Indigo floundering in my grandma's aquarium
>
> (her fish were always dying and being replaced).
>
> Black/White spots darting through the blueberry bushes (our tuxedo cat ran away after three short days).
>
> Grey fur buried in a pile of dirt (our bunny was put down because of a broken leg).

Animals were other. I did not understand that animals could weave themselves into the fabric of human environments.

Back then, I did not have the impetus to use the reflexive with animals: "animals could weave **themselves**". In writing this, I imply agency. Animals are the subject, attached to the verb ("weave") as a reflexive act.

Grammar can reinforce your otherness *or* grant you agency.

In our world – a world that is so human-centered that the emerging new geological age has been unofficially named *the Anthropocene* – humans have a lot of power.

I do not pretend there are not power dynamics between you and I. You weigh 2.5 kg; I weigh 29 times that. Do *the math*. That's a human expression.

I pick you up, all 2.5 kg of you – like a stack of books in my arms – and move you from the table to the floor. I tell you where to go, where to not go.

You are in my environment. I curate a space for you within *my* environment: you sleep here, you poop here, you eat here.

"This is her home too," my partner would say about our dog. Our family was a constant disentanglement of anthropocentrism.

Escape

You are always trying to escape. A friend and I joke that you are our *escape artist*. You linger at the door when I come home and when I leave. Our roommate dances sideways through the front door to keep you from escaping.

Many days you succeed. I become *cat* and you become *mouse*. I chase you around the apartment building and you end up in the darkest corner of the basement.

I tell myself it is your curiosity that drives you to flee our safe apartment for the unknown.

And yet, I have witnessed you in the unknown outside. You slither beneath cars, zoom up tree trunks, dive into bushes, and chase squirrels around the yard. You love to explore and roam unbounded. Life in a third-story city apartment deprives you of this wonder.

I fear it is your longing that drives you to flee our safe apartment for the unknown.

The night before we moved across the ocean you made your greatest escape. I brought you to visit friends – two humans, one dog, and one cat – that live on a property surrounded by forest and cornfields. When the human and I left to harvest vegetables from the garden, you escaped through the narrow crack in the door. I cried monsoons over you that night.

We spent hours hollowing your name into the darkness. We poked our flashlights under neighbors' cars, trespassed into backyards, and posted pictures of you on Facebook. Other humans who love you climbed out of their beds and ventured into the night to search. I tell everyone I would miss my flight before I moved across the ocean without you. I asked my friends again and again: *do you think she will come back?*

I stood by the cornfield and stared into the rows of stalks stretch-

ing high past my head. My chest squeezed. How would I ever find you in this vastness?

Four hours later, the search party has collapsed and a jack hammer has taken residence in my brain. When I lay down in my friend's bed, my mind spinning and looping like a rollercoaster I never wanted to ride, you enter prancing through the front door. Your fur is damp, and your paws are dirty. You glance innocently at me like you have simply walked over from across the room – not from the unknown outside. There is only delight and wonder in your big eyes. I scoop you into my arms and you purr.

Looking back, I think what I feared the most was your abandonment. *The narrative that would be created around your escape.* I adore my life with you and fear that this adoration is one-sided and egoistic.

Consent

When you show me your belly, I offer my hand. I wiggle palm and fingertips towards your belly, but your leg intervenes. I wiggle closer, and your foot remains between my hand and your belly. Play? Or is this your *no*?

Among humans, we use *verbal consent* to navigate the complex ethics of touching one another. *Consent* acknowledges that one has autonomy over their body.

Your body fits in the nook of my elbow, but it's yours.

I remove my hand and let your leg remain as your body-shield.

Domestication

The Humane Society would say that I *rescued* you from the perils of street life. That before me, your life was fraught with wildness: sleeping on the ground, dodging cars, forging for food in bushes and back alleys.

You were feral – wild – and now you are domesticated. In other words, you are now compatible with the human project.

Do I exist for your benefit, or do you exist for mine? I find no clear answer through the binoculars of history. You and I are entangled. Centuries of domestication have bound you to me. I needed you, so now – 10,000 years later – you need me. *She suffered on the street,* the vet says at your neutering.

Inheritance. Legacy. You and I are the beneficiaries of this domestication process.

Me, your caretaker. You, my domesticated house-bound companion.

You cannot disentangle the anthropocentrism from domestication. The domestication process was one of making you (non-human animal) more palpable and useful to me (human-animal).

Bird Watching

I am sipping coffee with you in the forest. A small red cabin has been transformed into a weekend café with lattes and scones. You are the color of dried pine needles and the forest leaves in their autumn dress.

We are walking, and you are leading (as always).

I kneel down in the gravel and pine needles. Yoga pants, full squat. I am finally eye level, but your eyes are hyper-focused beyond me. I follow your gaze to the bluejacket, dancing in the branches of the tall pine. Bluejacket sings, and you sing back. *Meow-hiss.* Are you friends or foes? Bluejacket dances towards the other café tables. Your neck twists in this new direction. The song and dance continue. I am quiet beside you, watching and listening.

I want to see the world through your eyes. I think this as you are dressed in a collar inscribed with a name I gave you and a blue harness *I strapped* on your body.

Eating Animals

But, why do you care? My roommate asks about my refusal to eat animals.

I did not always care. I care precisely because I got close. Flashes of color became a bright light that greeted me at the door every time I came home, snuggles at the end of a long day, sprints up and down the winding staircase.

I care because it is obvious that you are alive with preferences, desires, and intellect. I care because it is obvious that this aliveness is not limited to the animals kept in our homes.

Do You Love Me?

To live with a cat is to perpetually ask: *do you love me? do you love me? do you love me?*

I snuggle up to your pink button nose and whisper jibberish. *Aren't you the cutest patoti judy want you tummy rub judy-cutie your head is so small.*

Humans have such strange ways of saying *I love you.* We make so many different sounds*: I love you. Te quiero. Jeg elsker deg. Je t'aime.*

Many humans conceive love in terms of reciprocity. I love you precisely because you love me. We even have a specific term for this "novelty" of "one-sided love" between humans: unrequited love.

I love you, I love you, I love you

I am sorry, I am sorry, I am sorry

I love you, I love you, I love you

Do you love me?

Love from you is fantasy,

Locked inside the four walls of my brain.

A Netflix Documentary, *Inside the Mind of a Cat*, said that I love you, in cat language, is the slow-motion blink (Mitchell 2022). Every day, I lock eyes with you and slowly let my eye lids fall. I love you. *I love you. I love you.* You seldom do it back.

Only once in a while... perhaps on a full moon or when the rain drips slow outside... you walk up to me co-oooing, neck tilted, offering the small of your head to me. You lay down beside my hip bone – tail flapping, coiled like a closed loop system – and offer me your belly.

These days I have a new dream: You and I live reciprocally. You live unbounded, no longer tied to a leash or a harness. By the time I come home from my day, you have had a full day wandering the forest. You trek home to show me the mice you caught, drink some water, and curl up at the foot of my bed for the night. You show me your belly, and I offer you my hand.

Exploitation

What is this urge to squeeze, pet, kiss your tiny head? I ask you to lie on my chest on long nights. I invite you onto my lap in quiet moments. I am a *part* of you and *apart* from you.

To evoke the words of another human, Arturo Escobar, I am *radically related* to you (Escobar 2020, xiii). You and I can only be understood in terms of our relation to one another. I feed you. I pet you. You snuggle me. You delight me.

You are a literary analogy and tool. You inverts the subject. *You* has a centering effect. *You* becomes the subject of the narrative. This is about *you*.

If I write about you, and submit the writing to a magazine, do I exploit you?

In this act, particularly in its aestheticizing the anthropomorphic, I fear that I might reinforce hegemonic tendencies: that is, that you, a domesticated cat living inside a human environment, exist for my benefit.

Because, admittedly, this is also about me. This is about indulgent meta quandaries. A letter to you of personal and intellectual layers: admissions of anthropocentrism, self-consciousness, deep love accompanied by great fear. My disquiet splayed out in a letter to you: creative writing and misadventures in the human/non-human world.

I AM WRITING TO YOU BECAUSE OF THE NONHUMANS.

IN A WORLD WHERE WE BREATHE ANTHROPOCENTRISM LIKE SMOGGY AIR, OUR STORY – OF ONE HUMAN AND ONE CAT – INFUSES THE LUNGS WITH NEW AIR. I WILL SCRIBBLE THE WONDER OF OUR COMPANIONSHIP UNTIL THE WORLD RECOGNIZES THE INDISPENSABLE SHAPE OF YOUR CHARACTER.

References

Escobar, Arturo. 2020. *Pluriverse Politics: The Real and the Possible.* Durham and London: Duke University Press.

Bradshaw, John W. S. 2016. "Sociality in Cats: A Comparative Review." *Journal of Veterinary Behavior* 11: 120.

Mitchell, Andy. 2022. "Inside the Mind of a Cat." 67 min. United States: Netflix. https://www.netflix.com/no-en/title/81447086.

Pongrácz, Péter, and Julianna Szulamit Szapu. 2018. "The Socio-Cognitive Relationship between Cats and Humans – Companion Cats (Felis Catus) as Their Owners See Them." *Applied Animal Behaviour Science* 207: 57-66. https://doi.org/10.1016/j.applanim.2018.07.004.

WRITE FOR US!

Issue #18:
Borders, Margins, and Barriers

Crossing borders, inhabiting margins, being blocked by barriers. Our world is marked and traversed with both physical and metaphorical lines and liminal spaces. But how do we relate to and make sense of them? A singular border may be a place of joy and/or fear, a marginal area may be one of safety to retreat into and/or one of oppression, and barriers may question us: "will you overcome me?". Therefore, we invite submissions for the 2023/24 Tvergastein edition that relate to the prompt "Borders, Margins, and Barriers." Whether a reflection, discussion, and/or challenge, we would like *your* take on the borders, margins, and barriers that impact all aspects of existence on this planet. As this is an interdisciplinary journal, we warmly welcome any and all approaches, from academic to artistic, from the natural sciences to the humanities. We only request that your piece relates to the prompt!

(Need inspiration? Notice all the borders, margins, and barriers that have been established in this submission call alone!)

Deadline to express interest in sumbitting:
31st October, 2023

Tvergastein accepts submissions in two categories: Shorter op-ed pieces (2,000 – 5,000 characters) and longer articles (10, 000 – 20, 000 characters), in either English or Norwegian. Submissions in other languages could potentionally be accepted – please simply send a request to the team. We also welcome artwork, photos and poems.

For queries and submitions write to us:
tvergasteinjournal@gmail.com

Drawing Lines

In the Sand

© Richard Heerschap

The article gives a short insight into how natural processes and human activities change coastal lands, and discusses the Hondsbossche and Pettemer dike and Prins Hendrikzanddijk, two Dutch sand replenishment projects. It explains the applicable EU law and national legislation, with a focus on the interaction between nature conservation legislation and national security concerns. It concludes that EU law significantly reduces its Member States' discretion with regards to projects that adversely affect areas protected by EU nature conservation law compared to non-protected areas. In the latter case, customary international environmental law principles and a State's national policies and legislation might set a higher standard for nature conservation than EU law. They are therefore of special importance for conserving areas not protected by EU law.

Words by Sofie Van Canegem

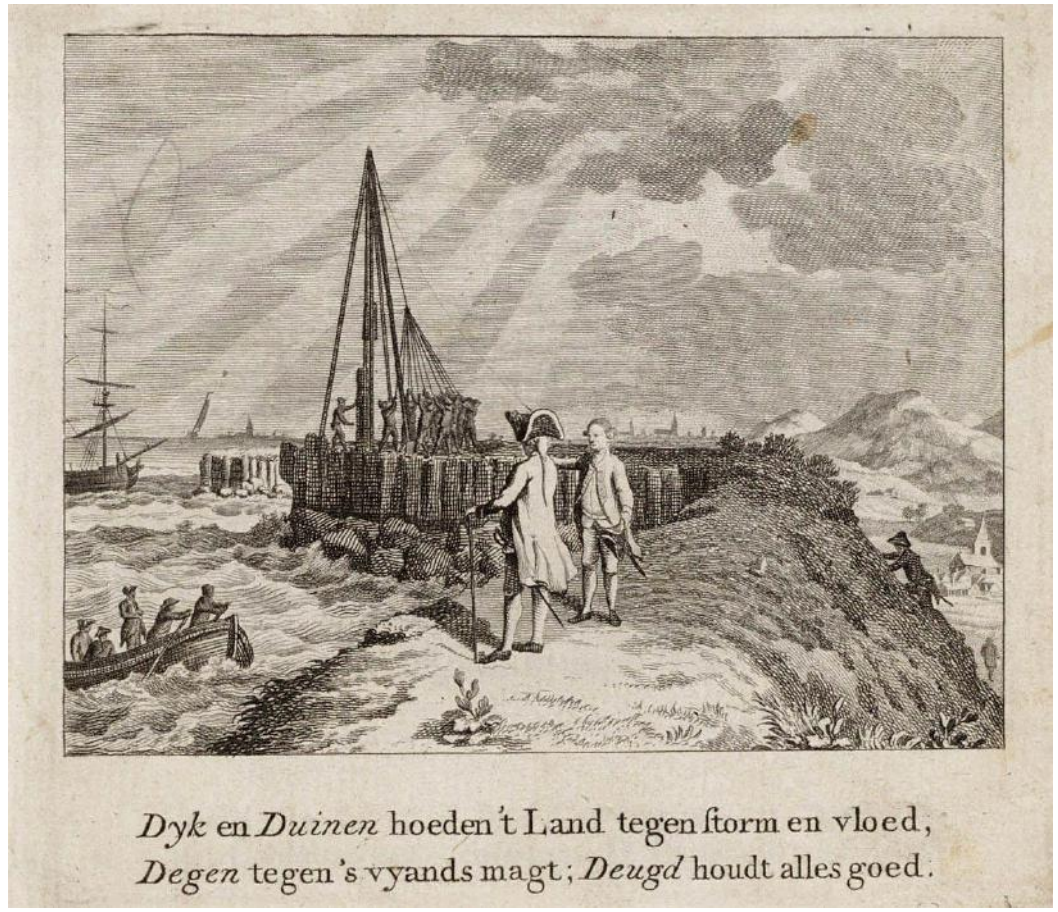
Introduction

In 1781, J. H. Swildens wrote that the preservation of the Netherlands primarily required its protection from the enemy and from the sea. Dikes and dunes must protect the land against storm and the tide. Through the ages, humans indirectly and directly changed coastlines: we built ports, replenished beaches, constructed artificial islands and dunes, etc. State authorities grant the permits, and although the State's discretion goes far, it is not absolute.

Following the principles of sovereignty under international law and article 2-3 of the UN Convention on the Law of the Sea (UNCLOS), the State has sovereignty over its territory, as well as the territorial sea which ranges up to 12 nautical miles from the baseline of a coastal State. Coastal areas and their extension into the territorial sea of the coastal State thus fall under the coastal State's jurisdiction. The State is therefore free to change coastal lands within the limits set by international law, EU law and national law.

With regards to environmental restrictions on an international level, coastal States are in general bound by the environmental limitations flowing from UNCLOS and principles of customary international environmental law, of which the most relevant ones in this regard are the principles of sustainable development, precaution, prevention and the requirement to carry out an environmental impact assessment. Those principles have also inspired EU law and national legislation, which EU Member States have to take into account.

This article gives a general overview of natural processes and human activities that change coastal lands. It then focuses on two projects undertaken in The Netherlands to secure the safety of coastal lands and communities, and explains the EU law and Dutch legislation that comes into play, as well as the interplay between nature conservation legislation and national security concerns. The generally high level of freedom to grant permits for coastal projects is limited in both EU and Dutch law when the proposed project negatively affects protected areas. In cases where the adversely affected area is not protected, it is important to look at customary international environmental law principles which might be more restrictive than EU law and Dutch conservation legislation.



Picture from Vaderlandsch A-B boek voor de Nederlandsche jeugd, 1781. Workers working diligently at the dyke. © Waterlands Archief.

Changing the coastline

Coastal lands are constantly changing due to breaking waves, tidal cycles, rivers and storms (United States Geological Survey 2008). For instance, waves break on the bottom of the coast line, crash into the shore, erode sand and relocate it from one area to another. Sea level changes also affect coastal dynamics, such as wave action along the coast. Local conditions, for example the composition and topography of the land, weather patterns and con-

figuration of the coastline, influence how the aforementioned processes and events interact and alter the coastal lands.

Human activities can impact natural processes and thereby indirectly affect the coastal lands (United States Geological Survey 2008). For example, removing dune grasses and sand dunes to improve the sea view removes the coast's natural shield against high waves and storms. Dredging navigation channels to facilitate transport takes away sediment from the natural coastal system, interfering with longshore sediment transport. Damming rivers for water catchment impedes the movements of sediments, causing sediment-starved coasts which then erode and move land inward. Offshore waste dumping pollutes and harms coastal environments, among which are coral reefs, which serve as natural breakwaters (Ferrario et al. 2014). Petroleum and water extraction lead to local subsidence, whereas human-induced climate change causes sea levels to rise globally (United States Geological Survey 2008).

Human activities also directly alter coastal lands, for instance by building and expanding harbours and ports to make them accessible for larger vessels and optimised transport, and by beach replenishment and land reclamation to create attractive tourist destinations and new living areas. Beach replenishment, also called renourishment, is the process of adding sediment or sand on eroded beaches (Bird and Lewis 2015). Among the many examples of beach replenishment are Miami beach in the United States of America and Balneário Camboriú in Brazil. Land reclamation is defined as a process that creates land by filling the desired sea area with rocks and sand (Stauber et al. 2016). Examples are land reclamation projects along the Ivory Coast and development of artificial islands, such as the Palm Island in Dubai.

Changing coastal lands to protect it from changing

Apart from economic purposes, States have changed coastal lands for reasons of national security. With increasing sea-levels and more regular and extreme weather events, climate change challenges coastal lands and communities (IPCC 2021). Paradoxically, to restrain (anthropogenically influenced) natural processes from altering coastal lands, States implemented safety-measures which themselves alter coastal lands.

The 2007 EU Directive on the assessment and management of flood risk (Floods Directive) applies to inland and coastal waters in the EU, and requires Member States to execute a three stage flood risk management. Member States need to undertake a preliminary flood risk assessment to identify areas with potential significant flood risk (art. 4-5). For such areas, flood hazard maps and flood risk maps, as well as flood risk management plans need to be developed (art. 6-7). The latter include measures to reduce the probability of flooding and its possible consequences. Every 6 years, the three stages are to be reviewed (art. 14).

The 1979 Birds Directive, amended in 2009, 1992 Habitats Directive, 2001 Strategic Environmental Assessment Directive and 2011 Environmental Impact Assessment Directive balance out human needs and nature's needs and push towards more environmentally-friendly water management. The Birds Directive and Habitats Directive form the cornerstones of EU nature conservation law and Natura 2000, a EU network of "core breeding and resting sites for rare and threatened species" and other rare natural habitats (European Commission X). Natura 2000-areas are both "special areas of conservation" protected under the Habitats Directive and "special protection areas" protected under the Birds Directive (art. 3 Habitats Directive). The Habitats Directive states that Member States must establish the necessary conservation measures for special areas of conservation, and take appropriate steps to avoid their deterioration (art. 6.1-6.2). Any project that might significantly impact areas of conservation needs to be properly assessed, and the Member State can only approve the project after reassuring that it will not negatively affect the integrity of the area of conservation (art. 6.3). Spatial interventions are thus not allowed, unless no other alternatives are available and there are "imperative reasons of overriding public interest" (art. 6.4). If the area hosts a priority species or priority natural habitat type, spatial interventions are only allowed if the "imperative reasons of overriding public interest" are human health or public safety or if the intervention has "beneficial consequences of primary importance for the environment" (art. 6.4). In all other cases, the Member State needs to request an opinion

from the Commission. If the requirements for an intervention are fulfilled, the Member State must compensate for the effects of the intervention by taking "all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected" (art. 6.4).

The Birds Directive stresses the importance of preserving, maintaining and re-establishing habitats for the endangered and migratory wild birds living in the European Union (art. 3-4). Member States must "take appropriate steps to avoid pollution or deterioration of habitats or any disturbances affecting the birds" regarding the special protection areas (art. 4). Also, vis-à-vis the habitats outside these protection areas, Member States must strive to avoid deterioration or pollution. They are free to introduce stricter protective measures than the measures provided under the Directive (art. 14), and need to report every three years to the Commission on the implementation of national provisions executed under the Directive (art. 12).

The European Court of Justice explained in the 2014 Briels case that protective measures aimed at compensating for negative effects on special areas of conservation cannot be taken into account when assessing the effects of a project on special areas of conservation. The case concerned the widening of a Dutch motorway, which was assessed to have a negative impact on Molinia meadows, a Natura 2000 site. To compensate for the negative impact, the State weakened the environmental impact in another Molinia meadow which was foreseen to develop into a high-quality habitat. The benefits of establishing a new habitat are difficult to predict and the positive effects are only visible over a longer period of time. The court therefore rendered that the possible benefits of establishing a new habitat cannot be taken into account when assessing whether a project will have negative effects on special areas of conservation under article 6.3, in order to circumvent the stricter requirements of article 6.4 that have to be fulfilled when planning projects that adversely affect these areas.

National legislation of EU's Member States implements these directives. The 2009 Water Act concerns the management and use of water systems. It replaces all existing acts concerning water management in the Netherlands and implements the Floods Directive. The Act is applicable in the territory of the Netherlands, which includes the territorial sea and the Dutch exclusive economic zone (art. 1.2 and 1.4). One of its primary objectives is to "prevent and, where necessary, limit flooding, swamping and water shortage" (art. 2.1).

The Hondsbossche and Pettemer dike and Prins Hendrikzanddijk are examples of hard engineering structures that, due to deterioration and rising sea-level, no longer fulfilled the safety standards set out in the Water Act (Hoogheemraadschap Hollands Noorderkwartier 2008). Hard engineering structures are not flexible, have a high financial cost of adoption, and low ecological sustainability (Perk et al. 2019). Therefore, new soft-nature based structures are being explored, such as sand replenishment in the form of an artificial sand dune or cross-shore beach. Due to their natural appearance and high ecological values, nature-inclusive structures are referred to as Engineering with Nature, Building with Nature or Living Shorelines (Kroon et al. 2022). Admittedly, soft-nature based structures also have disadvantages. For instance, for the Hondsbossche Dunes 35.5 million m^3 of sand were dredged out of the North sea (Van Oord and Boskalis 2016), and as natural processes erode the sand dune away, maintenance in the form of shore replenishment is required (Perk et al. 2019).

The updated version of the Hondsbossche and Pettemer sea wall was required to withstand a 1 in 10.000 year storm and sea level rise over the next 50 years (Hoogheemraadschap Hollands Noorderkwartier 2008). Additionally, the project had to take into account the bordering Natura 2000-area "Zwanenwater en Pettemerduinen", a nature reserve protected under the Habitat Directive with "Zwanenwater" being additionally protected under the Birds Directive. Also, national conservation legislation has to be taken into account. Numerous bird species living in the area were also protected under the 1998 Nature Protection Act, and other species were protected under the 1998 Fauna and Flora Act (Kroon et al. 2022). The 2017 Nature Conservation Act replaces these two acts, and implements the Habitats Directive and Birds Directive.

Additionally, the polder around the Hondsbossche and Pettemer sea wall is part of the Ecological Main Structure, now called Natuurnetwerk Nederland (Nature network The

Netherlands, abbreviation: NNN) (Smit et al. 2005), and is therefore subject to the "no, unless"-principle in the 2017 Nature Conservation Act which echoes article 6 of the Habitats Directive. Spatial interventions are not allowed, unless no other alternatives are possible, there is a major public interest and the effects of the intervention are compensated for (Ministries LNV and VROM and provinces 2007).

After an evaluation of the different options for strengthening the Hondsbossche and Pettemer dike and its (environmental) consequences, the government opted for a soft-nature based structure. Although no adverse effects were foreseen on the Natura 2000-areas, it was stated that in case these areas would be adversely affected, they needed to be compensated for (Smit et al. 2005). As sand replenishments would cover the current plant and animal life on the breakwaters, which are not designated Natura 2000-area, a decline in both the diversity in animal and plant life and the amount per species living in the area were expected. A similar decline in natural values is expected in the North Sea coastal zone that will be replenished for maintenance purposes, covering benthic animals in the area.

In 2015, artificial dunes with a beach were constructed in front of the old dike and the area was renamed to "the Hondsbossche Dunes" (Kroon et al. 2022). The beach is 1.5 to 2 times wider than the beach before the construction. The dunes act as flood defence, creating a space for nature to blossom and possibly evolve into Natura 2000-area (EcoShape 2018). The area is monitored to map the possible effects of the construction and to render advice for following projects (for example Ecoshape 2019).

A similar project was executed along the south-east coast of Texel, an island in the Dutch Wadden sea with Natura 2000-area under both the Habitats and Birds Directive. The old dike, Prins Hendrikdijk, was deemed insufficient following the Water Act, and new reinforcement has to comply with today's legal safety standards for 100 years, from 2019 to 2119 (Hoogreemraadschap Hollands Noorderkwartier et al. 2017). To abstain from interference with surrounding Natura 2000-area, the State authorities opted for the construction of a sand dune of circa 200 hectares in front of the old dike, renaming the area the Prins Hendrikzanddijk (Hoogreemraadschap Hollands Noorderkwartier et al. 2017). The new sand dune provides for a soft natural transition, transforming the current habitat and creating new habitat types, attractive for species for which a conservation or expansion target is set in the Natura 2000-management plan for the Wadden sea (Ministerie van Infrastructuur en Milieu 2016; Hoogreemraadschap Hollands Noorderkwartier et al. 2017). The Natura 2000-management plan also states that the project gives a quality boost for several species with an unfavourable conservation status (Ministerie van Infrastructuur en Milieu 2016). The Prins Hendrikszanddijk thus offers an integrated solution, combining the safety requirements with nature development (Hoogreemraadschap Hollands Noorderkwartier et al. 2017).

With no foreseen negative effects on Natura 2000-area or the nearby protected nature monument Ceres, until 2017 protected under the Nature Protection Act, and strengthening nature values in the area, the creation of artificial dunes was deemed the most environmentally friendly solution (Hoogreemraadschap Hollands Noorderkwartier et al. 2017). Some areas previously legally protected as «protected nature monument» under the Nature Protection Act are no longer protected under the new 2017 Nature Conservation Act. This affects previously protected nature monuments that are not identified as Natura 2000-areas, since Natura 2000-areas fall under the protection of the 2017 Nature Conservation Act. Provinces can identify previously protected nature monuments that are not Natura 2000-areas and other areas as "provincial nature reserve" or "special provincial landscape" (art. 2.43 2020 Supplementary Nature Environmental Act). The areas are part of the Nature network The Netherlands (NNN) (Stichting Erkende Restauratiekwaliteit Monumentenzorg X), and are protected under the 2016 Omgevingswet (2016 Environmental Law and Spatial Planning Act) and the additional acts adopted over the following years.

The project in Texel was supported and partly subsidised by a fund that invests in projects strengthening ecology and sustainable economic development in the Wadden area, and received the Nederlandse Netwerk Groene Bureaus Natuurprijs prize (Dutch Network Green Office Nature price), since it was considered "the most inspiring project regarding biodiversity" (Netwerk Groene Bu-

reaus 2020; Waddenfonds X). However, the general negative effects of sand replenishments as outlined in the example of the Hondsbossche Dunes have to be kept in mind, as well as the, even though minor, adverse effects on protected species, such as sea fish and other species protected under the Nature Conservation Act. It furthermore has to be kept in mind that there is a lack of research on effects on sea habitat and life, and that the assessment of negative effects on land area and species are mainly focused on protected species and habitat, and not species and habitat that are not yet protected.

Conclusion

The article discussed two projects in the Netherlands that changed the Dutch coast in order to fulfil the safety requirements set in the EU Floods Directive and Dutch Water Act. They illustrated the balancing act between nature conservation and national security, and the respective applicable legislation. When a proposed project adversely affects Natura 2000-area, the conditions for a project to be executed, as set in the Habitats Directive and Birds Directive, are significantly higher than when the proposed project does not adversely affect Natura 2000-areas. In the latter case, the proposed project only has to fulfil requirements flowing from the Strategic Environmental Assessment Directive and Environmental Impact Assessment Directive. It is therefore important that in those cases customary international environmental law principles and, if present, national conservation legislation are taken into account as they might set a higher standard than EU law for interfering with non-Natura 2000-areas.

In contrast to adversely affecting Natura 2000-area, the two Dutch projects created new dunes which may develop into Natura 2000-area. This does however not imply that the projects are totally free from guilt when it comes to negative environmental effects. A detailed overview of the negative effects and their significance is outside the scope of the article, yet to give a short insight: for the Hondsbossche Dunes 35.5 million m^3 of sand had to be extracted and replenishments have to be done regularly to maintain the area. Is this sustainable, considering that sand is a non-renewable resource? Sand mining is not free from disturbance for sea area and life either. Moreover, extracting, shipping and distributing sand requires a set of vehicles and working instruments, which have to be manufactured, which in turn requires materials and energy, and might, depending on the method of propulsion, emit CO2 when used. Additionally, research mostly focuses on the coastal area behind the artificial dunes and the artificial dunes themselves. There is no clear overview of the negative effects of the construction of artificial dunes on water life or on the life on the beach when being buried with new sand during beach replenishments.

In conclusion, redrawing coastlines falls within the sovereignty of a State, which in general enjoys a large discretion. It is therefore mostly up to the policy of the State and national legislation, especially in cases where the negatively affected area of a EU Member State is not protected under Natura 2000, to decide whether redrawing the world map is necessary and desirable. For instance, sand being a non-renewable resource creates dilemmas: Will it be used for projects that have the security of coastal lands and communities at heart or will it be used to construct man made islands seducing luxury tourists? Changing coastal lands is not without consequences either. It interferes with natural processes, brings them out of balance, and triggers a snowball effect, meaning that one change will require more future changes. The final question therefore is, where do States draw the line?

© Rijkswaterstaat

© Boskalis

Hondsbossche sea dike before and after replenishment. The orange line was added and marks the crest of the original Hondsbossche sea dike.

References

Bird, Eric and Nick Lewis. 2015. *Beach Renourishment.* New York: Springer.

Ecoshape. 2018. "Monitoringsrapportage 2017. HPZ innovatieproject, document v0.1." Accessed November 30, 2022. https://edepot.wur.nl/469410.

Ecoshape. 2019. "Innovatieproject Hondsbossche Duinen. Eindrapportage, definitief 0.1." Accessed November 30, 2022. https://www.ecoshape.org/app/uploads/sites/3/2016/07/Eindrapportage-Innovatieproject-Hondsbossche-Duinen.pdf.

European Commission. X. "Natura 2000." European Commission. Accessed November 30, 2022. https://ec.europa.eu/environment/nature/natura2000/index_en.htm.

IPCC. 2021. "Weather and climate extreme events in a changing climate." *In Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change,* 1513-1766. In press.

Ferrario, Filippo, Michael W. Beck, Curt D. Storlazzi, Fiorenza Micheli, Christine C. Shepard, and Laura Airoldi. 2014. "The effectiveness of coral reefs for coastal hazard risk reduction and adaptation." *Nature communications* 5:3794.

Hoogheemraadschap Hollands Noorderkwartier. 2008. "Startnotitie dijkversterking zwakke schakel Hondsbossche en Pettemer Zeerwering. Definitief." Accessed November 30, 2022. https://docplayer.nl/13408473-Startnotitie-dijkversterking-zwakke-schakel-hondsbossche-en-pettemer-zeewering.html.

Hoogheemraadschap Hollands Noorderkwartier, Witteveen+Bos Raadgevende ingenieurs B.V. 2017. "Prins Hendrikzanddijk. Projectplan. Vastgesteld bij besluit van het College van hoofdingelanden op 17 mei 2017 (besluitnummer 17.29511)." Accessed November 28, 2022.

Kroon, Anna, Matthieu de Schipper, Sierd de Vries, and Stefan Aarninkhof. 2022. "Subaqueous and subaerial beach changes after implementation of a mega nourishment in front of a sea dike." *J. Mar. Sci. Eng.* 10:1152.

Ministerie van Infrastructuur en Milieu. 2016. "Natura 2000-beheerplan. Waddenzee. Periode 2016-2022." Accessed November 30, 2022. https://www.bij12.nl/assets/Waddenzee-beheerplan.pdf.

Ministeries van LNV en VROM en de provincies. 2017. "Spelregels EHS: Beleidskader voor compensatiebeginsel, EHS-saldobenadering en herbegrenzen EHS." Accessed November 30, 2022. https://edepot.wur.nl/118519.

Netwerk Groene Bureaus. 2020. "Jaarverslag 2019 Netwerk Groene Bureaus." Accessed November 30, 2022. https://www.netwerkgroenebureaus.nl/download/NGB-Jaarverslag2019.pdf.

Perk, Luitze, Leo van Rijn, Kimberley Koudstaal, and Jan Fordeyn. 2019. "A rational method for the design of sand dike/dune systems at sheltered sites; Wadden Sea coast of Texel, The Netherlands." *J. Mar. Sci. Eng*. 7(9): 324.

Smit, C.J., Willem van Duin, R.J.H.G Henkens, and Pieter A. Slim. 2005. "Casus Hondsbossche zeewering: een verkenning van de ecologische effecten van verschillende kustverdedigingsvarianten in de omgeving van de Vereenigde Harger- en Pettemerpolder." In *Alterra-rapport* 1194. Accessed November 30, 2022. https://edepot.wur.nl/21040.

Stauber, Jennifer L., Anthony Chariton, and Simon Apte. 2016. "Global Change." In *Marine Ecotoxicology: Current Knowledge and Future Issues,* edited by Julián Blasco, Peter M. Chapman, Olivia Campana and Miriam Hampel, 273-313. Amsterdam: Elsevier.

Stichting Erkende Restauratiekwaliteit Monumentenzorg. X. "Bescherming van natuurwaarden binnen een groen monument." Stichting Erkende Restauratiekwaliteit Monumentenzorg. Accessed January 10, 2023. https://www.groenerfgoedzorg.nl/regelgeving/bescherming-van-natuurwaarden.

Swildens, Johan Hendrik. 1781. *Vaderlandsch A-B boek voor de Nederlandsche jeugd.* Amsterdam: W. Holtrop.

United States Geological Survey. 2008. "Coastal change." USGS Science of a changing world. Accessed November 30, 2022. https://pubs.usgs.gov/circ/c1075/change.html.

Van Oord and Boskalis. 2016. "Sandy reinforcement of the Hondsbossche and Pettemer Sea defence." Accessed November 30, 2022. www.westerndredging.org/phocadownload/2016_Env_Awards/Application%20Env%20Excellence%20Award%20-%20Hondsbossche%20and%20Pettemer%20sea%20defence.compressed.pdf.

Waddenfonds. X. "Twee projecten op Texel krijgen definitief subsidie." Waddenfonds. Accessed November 30, 2022. https://waddenfonds.nl/2020/11/19/twee-projecten-op-texel-krijgen-definitief-subsidie/

Waddenfonds. X "Het Waddenfonds." Waddenfonds. Accessed November 30, 2022. https://waddenfonds.nl/

All this useless knowledge

the limitations of human knowledge in Jeff VanderMeer's "Annihilation"

Words by Jessica Le Riche

This essay investigates the way in which Jeff VanderMeer's 2014 novel Annihilation presents the limitations to human knowledge in the face of freak ecological phenomena. To demonstrate this, Timothy Morton's concept of hyperobjects is employed in comparison to the environmentally strange and threatening site of Area X, which serves as the primary setting for VanderMeer's text. Parallels are drawn between framing of Area X and the human characters' relationship with such, and the way in which global warming is framed in the popular imagination. Following a brief outline of Morton's theory of hyperobjects and its parallels with Area X there will be a discussion of the decentring of human knowledge through the characters' struggles to understand Area X. Finally, the focus will turn to how figures of authority and power structures manipulate the limited knowledge of the characters, as well as wider narratives, to conceal the extent of Area X's threatening unknowability. Overall, Annihilation will be presented as a text that reflets a decentring of human knowledge and intellectual dominance when faced with the issue of vast, uncanny ecological hyperobjects. With this decentring comes the promotion of acceptance and coexistence with the unknown opposed to resistance and fear of that which resists interpretation.

Introduction

Jeff VanderMeer's 2014 novel *Annihilation* is book one of the Southern Reach Trilogy. The trilogy is named after the fictional top-secret government agency, which is tasked with the challenge of exploring, controlling, and understanding a freak ecological site called "Area X." *Annihilation* follows the members of the twelfth expedition into Area X, consisting of four women identified only by their professions: the biologist, the psychologist, the anthropologist, and the surveyor. Narrated by the biologist, the novel focuses on how the more the expedition attempts to interpret and understand Area X's 'unnatural' phenomena, the more relentlessly mysterious and uncanny it becomes. In this sense, this essay will present *Annihilation* as a text that interrogates the limitations of human knowledge. As a starting point, I will discuss Timothy Morton's theory of hyperobjects, and how Area X can equally be considered one such hyperobject as it continuously moves further away from an understandable entity. Following this, I will expand on how VanderMeer decentres human knowledge through the characters' confrontation with the unknowable and uninterpretable, before discussing the text's employment of figures of authority and power structures to manipulate the limited knowledge possessed by the characters, and their relationship to such. Overall, VanderMeer presents a narrative criticising the way in which humanity attempts to control and classify the world to maintain dominance over the nonhuman aspects of the planet. Area X serves as an allegory of the limits to human knowledge, demonstrating that through resistance, we risk being consumed by the unknown. Alternatively, as the Biologist shows in the novel, we can embrace the unknown and accept the interconnectedness of the human and nonhuman that comes with it.

Hyperobjects

Morton (2013a, 1) "coined the term hyperobjects to refer to things that are massively distributed in time and space relative to humans." He emphasises that hyperobjects are not "a function of our knowledge: [the hyperobject is] *hyper* relative to worms, lemons, and ultraviolet rays, as well as humans" (2). This establishes the idea that hyperobjects are entities that transcend the limits of the human imagination,and the concept of human intellectual dominance, because they stand as a relative reality to everything in existence. Therefore, the concept of hyperobjects and their vastness in time and space helps to destabilise the belief of human dominance over the nonhuman. In the face of the hyperobject, everything else is equally balanced and affected. Morton (2013, 2) further reinforces this point by stating that it would not "be right to say that hyperobjects are figments of the (human) imagination Hyperobjects are real whether or not someone is thinking of them." Hyperobjects highlight the limitations of human knowledge to completely understand them, consequently encouraging the acceptance of humanity's position as another earthly element caught in the tide of hyperobjects.

In *Annihilation*, it could be argued that Area X is a hyperobject. The biologist states that "when Area X first appeared, there was vagueness and confusion, and it is still true that out in the world not many people know that it exists" (VanderMeer 2014, 94). She continues, asserting that "the idea of 'Area X' lingered in many people's minds like a dark fairy tale, something they did not want to think about too closely. If they thought about it at all. We had so many other problems" (VanderMeer 2014, 94). The use of the phrase "if they thought about it at all" reinforces the idea of the existence of Area X regardless of its conception in the human imagination. Additionally, describing this conception as "a dark fairy tale" suggests a general lack of concrete understanding, reducing the place to one of myth – somewhere equally real and unreal. There is also the implication of fear that comes with considerations of the reality of Area X. By explaining: "we had so many other problems," the biologist is recognising the unsaid acknowledgement of the threat of Area X to the greater society, suggesting a collective attempt to ignore this fact with the hope of it vanishing.

This could be said to reflect contemporary thinking towards global warming and ecological awareness. In another essay on hyperobjects, *Poisoned Ground*, Morton (2013b, 39) asserts that "the grounding of reason in the human subject is over, while the idea of a neutral ground beneath our feet has also ended... the ecological awareness of poisoned ground thrusts us into an acknowledgment

of our disturbing, uncanny existence with other beings [including hyperobjects]." Here, Morton is addressing the fear that comes with recognising humanity's relative powerlessness in comparison with entities beyond our understanding, such as the vast consequences of global warming. This fearful realisation, similar to the realisation of Area X, presents people with two choices. The first choice is to confront the problem, accepting the uncontrollability and unpredictability of hyperobjects which lie beyond complete understanding. The second choice is to focus on smaller, more manageable and understandable issues, thus continuing in blissful ignorance regarding the larger ecological threat. The latter is evidently what the general population chooses in *Annihilation*. Therefore, Area X could be classified as a hyperobject in the sense that it is an uncanny and disturbing place that resists complete human understanding, evoking similarities to attitudes towards global warming and the fear of complete ecological awareness.

Decentring of human knowledge

As I have already touched upon, a key feature of Area X as a hyperobject, and hyperobjects in general, is that they appear to resist human interpretation, rationalisation, and understanding. Morton (2013a, 6) states that "the more we know about hyperobjects, the stranger they become," and that this creates a sense of fear. The confrontation of "these entities," argues Morton (2013a, 15), is that they "cause us to reflect on our very place on Earth and in the cosmos... hyperobjects seem to force something on us, something that affects some core ideas of what it means to exist, what Earth is, what society is." Ultimately, he concludes that humans are forced to accept and realise that "no: we are not in the centre of the universe, but we are not in the VIP box beyond the edge, either. To say the least, this is a profoundly disturbing realisation. It is the true content of ecological awareness" (18). By facing and acknowledging hyperobjects, humans must accept the diminishment of their self-thought dominant position, and the presence of unknowable and uncontrollable forces.

In *Annihilation*, the reader experiences this realisation through the character of the biologist. In her analysis of the nonhuman ethics in the novel, Finola Anne Prendergast (2017, 334-5) states that:

The biologist, our narrator, comes to believe that Area X is sentient, powerful, and alien. The landscape's ineffability forces her into an epistemological crisis, after which she can either remain suspended in a sceptical void forestalling engagement with Area X, or act on what she thinks she knows despite her limited understanding.

The "epistemological crisis" the biologist faces comes as a result of the failure to draw logical biological conclusions from her numerous findings. In the beginning of the expedition, the members find themselves investigating a "tower" (as the biologist insists on defining it) which stretches deep below the ground. Already uneased and intrigued by the strangeness of Area X, and as she follows the organically produced scrawling biblical-style script on the walls, the biologist states: "I took samples as we went, but half-heartedly... what would they tell me? Not much, I felt. Sometimes you get a sense of when the truth of things will not be revealed by microscopes" (VanderMeer 2014, 50). Here, the biologist is already doubtful of how successful her attempts of discovery will be. Even when analysing the samples collected, the biologist remarks: "my samples told a series of jokes with punchlines I didn't understand... the tissue sample from the hand-shaped creature resisted any interpretation, and that was strange but told me nothing" (VanderMeer 2014, 71). It thus becomes clear to the biologist that Area X is a place that "resisted any interpretation" – even the strangeness of this resistance does not prove insightful to understanding Area X. Later in the text, after she discovers the pile of old expedition journals left to rot in the lighthouse, the biologist concluded that "Area X broke minds, I felt, even though it hadn't yet broken mine. A line from a song kept coming back to me: *All this useless knowledge"* (VanderMeer 2014, 119, emphasis in original). This finally reinforces the crushing force of Area X on the individual mind attempting to understand and interpret it, yet seeing it constantly evade the bounds of human knowledge. Equally reflected here is Morton's previous argument that facing hyperobjects causes the "disturbing realisation" of humanity's non-privileged position in the world. This idea of useless knowledge challenges the ability of humans to acquire knowledge to control what is yet unknown. Even with more knowledge, the biologist finds,

she remains no closer to any semblance of control or understanding in Area X. The biologist shows how the acceptance of "all this useless knowledge", as opposed to resistance to it, is the key to existing in cohabitation with the hyperobject of Area X, as it has not yet broken her mind. This is due to her continuation despite limited understanding, as Prendergast stated.

The lack of knowledge and understanding is particularly heightened through the emphasis of the expedition members' professions. Early in the narrative, the biologist states: "we're meant to be focused on our purpose and 'anything personal should be left behind'. Names belonged to where we had come from, not to who we were while embedded in Area X" (VanderMeer 2014, 9). This illustrates the Southern Reach's attempt to keep the expeditions focused on their tasks – by reducing each individual to a scientific profession and "purpose." Furthermore, following the discovery of the dead anthropologist and the disappearance of the psychologist, the biologist reflects that "we were scientists, trained to observe natural phenomena and the result of human activity. We had not been trained to encounter what appeared to be the uncanny" (VanderMeer 2014, 69). This continues to suggest the predetermined sense of purpose held by the expedition members and the trust they held in their abilities, which paradoxically made them unequipped to handle the odd reality of the scientific mission. In his review of the Southern Reach Trilogy, Sam Gormley (2019, 113) equally recognises this paradox, arguing that "[Area X] defies scientific capture; in fact, it infiltrates and disturbs scientific methodology itself," thereby colouring the expeditioners' purposes with a sense of irony as they are sent to scientifically research a place that defies science. Gormley (2019, 114) continues to observe *Annihilation's* showing up of "the limitations of human intelligence and the devices the species has developed to make sense of the world." As the biologist confirms, "always, the emphasis was on our own capabilities and knowledge base... there had been an almost wilful intent to obscure, to misdirect, disguised as concern that we not be frightened or overwhelmed" (VanderMeer 2014, 66). This supports the idea that the heavily placed importance on their scientific roles and abilities only served to thematically highlight the misplaced hubris in human knowledge. As a result, it serves as a concentrated example of the larger realisation of the inadequacies of human intellectual dominance in the face of hyperobjects. A small group of specialised experts failing to understand one ecological area can be extrapolated to mirror humanity's failure to understand the full extent of ecological hyperobjects.

Power structures and the manipulation of knowledge

Throughout *Annihilation*, and as I have already alluded to in the observations about the sacrifice of individuality for scientific profession, the Southern Reach haunts the expedition continuously. The biologist describes the Southern Reach as "the clandestine agency that dealt with all matters connected to Area X" (VanderMeer 2014, 9). Thus establishing it as not only the driving force behind all missions into Area X, but also as the key link to and representation of life beyond the border. She later reveals the governmental approach to Area X regarding the explanation given to the general public:

The government's version of events emphasised a localised environmental catastrophe stemming from experimental military research. This story leaked into the public sphere over a period of several months so that... people found the news entering their consciousness gradually as part of the general daily noise of media oversaturation about ongoing ecological devastation. (VanderMeer 2014, 94)

This engineering of collective consciousness highlights the ability of those in power to manipulate knowledge. The government's response to the appearance of Area X is to keep most of the population ignorant to the truth of its nature – that it is an ecological anomaly which threatens the balance of human life. This manipulation of facts can relate to Morton's (2013a, 8) observations on the apparent interchanged use of the terms 'global warming' and climate change'. He points out that the fact that these terms have become synonyms for one another is a failure "since logically it is correct to say 'climate change as a result of global warming', where 'climate change' is just a compression of a more detailed phrase" (8). Morton (2013a, 7-8) suggests that the term 'climate change' has been used tactically by the media

and politics to downplay the primary issue – that of global warming. Large numbers of the general public arguably look to the authority of national institutions to direct their attention and calm their anxieties. Thus, if the government fails to recognize the hyperobject of global warming, they may wish to subdue the panic by filtering the issue through the use of tactical language. *Annihilation* reflects this technique by ascribing the catastrophe of Area X to an ecological disaster. It is lost in what the biologist recognises as an oversaturated media about "ongoing ecological devastation". This consequently prevents the large-scale acceptance of incomprehensible hyperobjects, thus maintaining the fragile illusion of dominant human knowledge. The problems are posed as being best left in the hands of experts, which, as we have already seen, is not enough due to the failure of the problem to be properly theorised and understood by said experts.

Prendergast (2017, 347-8) argues that the "horror [of *Annihilation*] springs from a sense that an animated nonhuman world would compromise human autonomy and value" and that "humanity's acceptance of nonhuman life's value" results in "the admission that human life is not *uniquely* valuable." Therefore, by embracing hyperobjects such as Area X, the consequence is recognising a diminished value of human dominance and an increased value of nonhuman entities, which sacrifices some human autonomy in order to accommodate the nonhuman world. However, she states that "the novel exposes contemporary human society's violations [of autonomy]" (Prendergast 2017, 349). Thereby, Prendergast suggests that the compromise of freedom to environmental ethics is no greater than what we already experience. This is demonstrated through the aforementioned control exercised over the expedition members that requires them to give up their identities to become mere professions. Following the interrogation and death of the psychologist, the biologist finds an envelope with a name written on it, leading her to observe that "a name was a dangerous luxury [in Area X]. Sacrifices didn't need names. People who served a function didn't need to be named" (VanderMeer 2014, 134). She recognises their position as sacrifices made by the Southern Reach in the search for the unknowable, as well as the sacrifices of themselves to a misleading mission as a result of false knowledge and information.

The biologist serves to illustrate how accepting hyperobjects for what they are, and not trying to confine them to the limits of human knowledge, is the way to see and accept the world in all its unexplainable inconsistencies. After accidently breathing in spores upon her first descent into the tower, the biologist observes: "I now could guess at one way in which the spores had affected me: they had made me immune to the psychologist's hypnotic suggestion" (VanderMeer 2014, 33). The absorption of spores could be read as a metaphor for the biologist's absorbance and acceptance of Area X. This allows her to see the world without the attempted control of the psychologist and implanted suggestion of the security of her prior knowledge. If the psychologist could not tell her how she should feel or what she should be seeing, the biologist is free to experience Area X in all its weirdness and uncanniness, allowing her to accept what she does not logically understand. The use of the word "immune" is also loaded with connotations of the disease of predetermined human knowledge. She is cured of the toxic belief in the solidity of her scientific classifications and theories, thus allowing her to apply said knowledge and find it wanting in the hyperobject of Area X.

Conclusion

In conclusion, *Annihilation* is a novel that focuses on the limitations of human knowledge, particularly in the face of weird and uncanny hyperobjects. However, through the biologist and the Southern Reach, two choices are presented: either accept the unknown and intrinsic value of the nonhuman world, or deny the impossibility of not knowing and continue a fearful crusade of unnecessary sacrifice in an attempt to confine the world to the limited bounds of human knowledge. The novel illustrates that the former choice, that of the biologist, leads to an acceptance of and coexistence with an unknowable world in which hyperobjects rule. Furthermore, the weird aspect of the text perpetuates the concept of not knowing. Though the biologist struggles to adequately

explain Area X, and the reader may struggle to entirely understand the book (which fails to answer many questions), it is not necessarily a bad thing – just an uncanny experience. Yet, embracing the nonhuman, uncanny, and unknowable leads the way to a more ecologically aware future where we see the value in the nonhuman at the expense of acceptance that dominant human knowledge is not unlimited in this weird world of hyperobjects.

References

Gormley, Sam. 2019. "*The Southern Reach Trilogy* by Jeff VanderMeer, and: *Borne* (review)." *Configurations* 27(1): 111-116. https://doi.org/10.1353/con.2019.0004.

Morton, Timothy. 2013a. *Hyperobjects: Philosophy and Ecology after the End of the World*. Minnesota and London: University of Minnesota Press.

Morton, Timothy. 2013b. "Poisoned Ground: Art and Philosophy in the Time of Hyperobjects". *Symploke* 21(1-2): 37-50.

Prendergast, Finola Anne. 2017. "Revising Nonhuman Ethics in Jeff VanderMeer's *Annihilation*." *Contemporary Literature* 58(3): 333-360.

VanderMeer, Jeff. 2014. *Annihilation*. London: Fourth Estate.

3:05 AM
“We’re all connected”

Words by Wouter de Rijk

It is 2:50 A M in a warm, damp jazz club somewhere under an old railway viaduct in Rotterdam on the weekend of one of the biggest jazz festivals in Europe. I’m standing in the crowd, taking in the energy of the jam session. On stage, young artists, many of them still students at the music school, mingle together with renowned performers in a seemingly endlessly meandering improvisation. Then, the legendary sax player Gary Bartz, aged 81, steps onto the stage with some fellow musicians ready to join the jam. As the previous tune branches out towards an end, the artists make space for the respected veterans.

As usual, the rhythm section plants the seed for the next tune to unravel, this time very timid and small. It is 3:05 AM; one of Bartz's sidemen steps up to the microphone in the middle of the stage, saxophone casually dangling from his neck. Rather than bringing the saxophone to his lips, he moves in on the microphone and starts singing, his voice rich and soulful. As the vibrations of his voice fill the room, it transfers a spiritual energy that descends on the crowd. Chatter slowly dies out and everyone's attention is focused on the stage.

Following the rhythm, he sings: "We're all connected / So we must treat each other right". In this moment, the energy that is radiating from him, the words that reach my ears, and the rhythm that flows like a heartbeat bundle together and pierce right through my body. From my feet, a cold shiver runs up my legs and spine all the way to the crown of my head. As this shiver cuts through me, a wave of warmth radiates through my entire body. It feels as if a massive dam breaks down inside of me and with it my sense of self withers. I feel part of this larger whole that is unfolding right in front of me, carried away on the meandering river together with everyone in that room. Luke-warm tears are making their way down my cheeks. And in this moment, my heart feels open with an unlimited love and gratitude for all that is, and everything feels possible. It is like I'm dreaming while all of my senses are wholly awake.

Only later I found the words to understand what I had exactly felt that night. I was sure that what I had felt was not just an individual experience, not just an individual moment of joy, a ripple of excitement in the normal course of life. It was when I was reading Mark Fisher's introduction to *Acid Communism* (2018), the book which he never got to finish, that I understood that this moment was like a door-way that let me peek into an often forgotten and misunderstood near-past: the once widespread social and psychic revolution of the 1960s and 70s counterculture. According to Fisher, the dominant narrative of this counterculture is that it produced a wave of individualism that eventually culminated in a new type of individualism that was imposed by the neoliberal counter-revolution.

However, this narrative of the 1960s and 70s is a gross oversimplification, robbing the counterculture of all the potency it possessed. That potency, as Fisher writes, was not as much political, but rather mostly cultural, with music being one domain where this potential power was widely articulated. It was in this period that music, even pop music, was influenced by the psychedelic; conceptions of consciousness and ordinary categories of meaning were challenged. Breaking down meanings that once seemed natural, the psychedelic brought about what was the dangerous – to the status quo, that is – power of the counterculture: it evoked yearning and dreaming "for a world which could be free" (Fisher 2018, 1121). A postcapitalist world in which people are freed of the subjugation of capital and related logics of oppression, such as sexism and racism. The counterculture re-awakened class consciousness amongst groups that had been sequestered, for example, fostering alliances between the traditional working classes and students. Neoliberalism, then, was first and foremost about eradicating this "spectre of a world which could be free" and the different forms of collectivity that were emerging from it (1121).

The day after the jam session, I feel a strong urge to be alone in nature. By bike, I head to the dunes on the North Sea coast. The warm energy that radiated through my body the night before hasn't yet left me and I'm swinging my bike from left to right over the dune path. Having found a shallow dune slack, I lie down and look up to the July summer sky. As my breath slows down and the sweat evaporates from my skin, my mind starts wandering off to the hazy passage between waking and sleeping. It feels as if I dissolve into the warmth of the sand and air; the grains become a mould of my body, while I'm wrapped in a balmy blanket of ether. In this dreamy state, my self slowly becomes entangled with all that is around me. Slowed down and connected, my senses have awakened since the moment in the jazz club. It is like I touch upon the essence of my existence. My senses powerfully remind me of what has been gradually numbed over the years: to live is to be connected, connected in the web of life. Connected to all matter around us, human and non-human. Matter that speaks to us through our senses.

It is this opening up of the senses to the whispers of the web of life that gave the 1960s and 70s counterculture its boundary-defying potency. While this potency undoubtedly lies in the past, the elements that composed it are still all around us. We're still surrounded by art that has the power to evoke yearnings and dreamings, that makes us feel part of a larger whole rather than atomic individuals, and that breaks down the narrowly defined boundaries of our daily experience. The singer was right: we're all connected in the larger web of life. Anything can open our hearts and fill us with an intense love for everything around us. For me, it was that night in the damp jazz club.

It is that exact feeling of connectedness and love that has the potential to unleash an extraordinary power to break down the boundaries of what seems possible. To break down boundaries between us and them, of the human and non-human world. It has the power to evoke dreaming and yearnings that open up the potential for new forms of collectivity to arise. Social change is necessary. And one thing is for sure: the social change we need is based on love, empathy, and mutual aid.

As I make my way back to the city, I stop in the sand on the side of the dune path. In my notebook, I write: "That energy of the jam session, that is anarchism right there: cooperation and mutual aid in an endless collaboration."

References

Fisher, Mark. 2018. "Acid Communism (unfinished introduction)." In *K-punk: The Collected and Unpublished Writings of Mark Fisher*, edited by Darren Ambrose, 1121-1152. London: Repeater Books.

RuneScape Beyond the Computer

Amidst a period of hyperinflation in Venezuela, the MMORPG (massively multiplayer online role playing game) Old School RuneScape was host to thousands of Venezuelans collecting in-game gold in order to earn an income in a stable currency. This article presents a case study of Venezuelan 'gold farmers' clashing with RuneScape players from high-income economies, prompting a discussion on whether encounters in virtual spaces can be regarded as political or environmental events. Drawing upon fields such as extractivism and Marxian literature, the article concludes that the digital and material are intricately intertwined, and that clan battles inside of RuneScape have political and environmental dimensions that extend well beyond the videogame. This conclusion is situated within methodological discussions surrounding material semiotics and more-than-human studies in order to probe how academic inquiries into similar digital phenomena might proceed.

Words by Ty Tarnowski

Introduction: The RuneScape Gold Piece

Whom and what do we touch when we log on to an online game? When Donna Haraway (2008, 6) mused about touching a digital photo of an assemblage of lichens and mosses fashioned in the likeness of a dog, she described being inside "histories of IT engineering, electronic product assembly-line labor, mining and IT waste disposal, plastics research and manufacturing, transnational markets, communications systems, and technocultural consumer habits." By touching a computer mouse we encounter the bacteria growing on its surface, and by logging on we touch a vast network that stretches beyond the computer screen and the cables that connect us to internet servers. The reverberations from touching this network in turn echo back to touch us. To begin an exercise of probing a minute fragment of these reverberations as they move beyond the bounds of one online game, RuneScape, I first move to a discussion about currencies.

What is money? Throughout the various incarnations of what has been deemed currency, money has satisfied three basic functions: (1) medium of exchange; (2) unit of account; and (3) store of value (see Ammous 2018). Take the Venezuelan currency, the bolivar, as an example: in the storefronts of Caracas, it can be exchanged for a commodity, and the vendor can then use the bolivar to track their monthly profit, depositing any surplus revenue into a bank where they can expect it to retain value over time. However, what happens when the third promise of money—store of value—deteriorates? If this vendor had deposited income into a Venezuelan bank in 2016, estimates reveal that by 2020, the relative price of commodities to the bolivar rose over 89,000% (Webster 2021), rendering the money deposited effectively valueless. Throughout the 2010s, hyperinflation eroded the bolivar's purchasing power, leading many Venezuelans to seek out other means of receiving income, where the money's store of value was relatively reliable.

One such form of *money*, taken in the literal sense of the word, is the video game currency Old School RuneScape Gold Piece (hereafter RSGP). Throughout the same period, from 2016 to 2020, in comparison to the US dollar, the value of RSGP remained relatively stable (CoinMarketCap, n.d.). RSGP satisfies all the basic functions of money. For example, for 91 RSGP, a player in Old School RuneScape (OSRS) can purchase an in-game steel dagger. If a player opens their in-game bank account, an indicator automatically displays the value of the various items in their bank in RSGP, much like how an individual can estimate the value of their assets in USD. Moreover, certainly in comparison to the bolivar, a player can expect that RSGP deposited into the Bank of RuneScape will retain its value over time. On top of this, there is a 'foreign exchange' market for exchanging currencies such as USD or bitcoin to RSGP and vice versa, which, although officially against the rules of the game, is a thriving ecosystem and a focal point of this article.

A prominent and intentional feature of Old School RuneScape is that, as its name portends, it is decidedly *old school,* tapping into an 8-bit nostalgia. This version of the MMORPG (massively multiplayer online role-playing game) is an offshoot of the original RuneScape servers and is backdated to run on technical specifications as they were in 2007. This means that virtually any computer with a semi-stable internet connection can run the game. Here, a potential avenue opened up for Venezuelans with internet access, which amounted to approximately 12 million people at the time (Freedom House 2012). 'Work' in Old School RuneScape could be compensated with RSGP and then exchanged for USD, effectively bypassing the inflationary trap of the bolivar. This article intends to explore the consequences of these conditions: thousands of Venezuelans flocking to OSRS as a means of earning a living. The stories that ensue, compiled from interviews with media outlets and forum posts, are ones of unlikely worlds colliding in virtual spaces, and of digital land disputes with material consequences. The article then turns to meditating on if, and how, these encounters and contestations taking place in an online space can be viewed as entangled with political or environmental concerns. Finally, this analysis is positioned in more-than-human methodological discussions, probing how an academic inquiry into this type of phenomena might proceed.

Your Adventure Awaits

Once you've picked a unique username, designed the appearance of your avatar, and learned the basics on Tutorial Island, your adventure awaits in the world of Old School RuneScape, the land of Gielinor. You will find yourself teleported to the pixelated courtyard of Lumbridge Castle with other real players bustling around, and from here, your possibilities are nearly endless. You can level up skills ranging from mining to magic, construction to strength, or throw yourself into quests that involve overthrowing kingdoms or assisting the local cook. You can team up with other players and form an exclusive clan. As you level up your character and grow strong enough to take on tougher enemies, the items that you can harvest become much more valuable. With this coveted loot, you will be able to challenge the most difficult monsters, and become a feared combatant in player-versus-player battles. However, getting to this point is painstakingly tedious. For example, one website (Theoatrix 2019) estimates that it takes about 160 hours to reach the highest level of the skill 'mining', which enables you to extract the rarest ores in the game for the highest rate of profit. Those hours are not spent solving puzzles, overthrowing kingdoms, or fighting complex bosses; most of them are spent repeatedly clicking on rocks, running to the bank to empty your backpack, and then returning to the quarry to click on some more rocks.

A workaround for the casual player looking to maximise their leisure time is to purchase RSGP with another currency. For some, it is a completely justifiable transaction; a few bucks can raise your status in the game and spare you days of grinding mind-numbing tasks to get the best items, making more time for the interactive and high-stakes gameplay. This demand for easy in-game money creates a real-world business opportunity: working to supply RSGP. A significant portion of these players meeting the demand for RSGP come from Venezuela, where they carry out tedious tasks such as chopping wood, mining, or killing the same monster repeatedly in order to earn a salary in a stable currency. Although the prospect of playing a game for 'work' may sound enticing, for these 'players' the game is not so much a video game as it is the slog of menial labour. In an interview with *Slate*, one Venezuelan gold miner commented, "there are times I simply can't bear the sight of the game... but if it's for money, I can put up with it a bit. It's simply my job. And from it, I'm able to live" (Weiss 2021). Moreover, this menial labour enhances the experience for more privileged players, whose game is 'sped up' by the elimination of monotonous gameplay that becomes the burden of gold farmers. These contrasting temporalities inherently implicate politics and inequality, which this article will turn to later. The mechanisms of this RSGP market may seem quite straightforward: there is a demand from players wishing to maximise their leisure time, and a supply from Venezuelans (among others) with semi-reliable internet connections and time to work for money outside of their domestic currency. However, the ways these stories have played out are often far more nuanced than the macro-economic narrative.

Tales from Gielinor

In Gielinor, the most profitable area to extract resources is the Revenant Caves. But the reward doesn't come without risk: the caves are located in the 'wilderness', a region of the world where players can attack other players, killing them and looting their items. For Venezuelan gold farmers, this region not only presents an opportunity for the highest 'wage', it also carries the risk of being set back hours, if not days, by losing their equipment to player-killers. As mentioned in the previous section, individual players may choose to form clans with other players, and in the context of the 'wilderness' this can lead to powerful alliances. One such clan, who call themselves 'Reign of Terror', became so powerful and adept at teaming up to kill other players that they effectively controlled the Revenant Caves several years ago. Around the clock there were clan members guarding the entrance and collecting a fee from players who wanted to enter, granting them temporary protection from being killed by a member of the clan. The clan was founded in 2004 by players in the United States and is fully equipped with an online forum, testaments, and a thorough leadership structure. Not only do they terrorise players within the bounds of the game, but they also report Venezuelans to be banned, tamper with players' servers,

and reveal actual identities in order to send plausible threats (RuneScape Clans Wiki, n.d.). Along with a large swath of the game's community, this group targets Venezuelans for interfering with the in-game economy. This has gone as far as a guide being published on how to (in-game) identify and kill Venezuelan players (Good 2017). Venezuelan gold farmers who wished to use the Caves were forced to give a cut to the clan in order to survive there. Essentially they were being extorted by a mafia-like group under the threat of in-game, and in extreme cases, real-world violence. This line between in-game and 'real world' blurs when taking into consideration accounts such as one Venezuelan gold farmer's reporting to the publication *Polygon*: "I can't talk for my pals, but for me without OSRS, my family would have starved" (Ombler, 2020).

Rather than acquiesce to the exploitation of this domineering clan, many Venezuelan players grouped up to fight back. In January 2020, a war fought with magic, archery, and holy swords took place over the control of the Revenant Caves. After a week of nonstop battle, the so-called 'Venezuelan Mafia' outlasted the Reign of Terror and claimed the caves for their own use and profit (Aronczyk & Beras 2021). This was not the story of all Venezuelan gold farmers, nor was it the end of their struggle with finding subsistence in the precarious terrain of online videogames. In fact, shortly after the Venezuelan players' take-over of the Caves, the game developers stepped in to make the area less profitable (Aronczyk & Beras 2021). This story is just one piece of a much larger anthology of unlikely worlds colliding in virtual spaces. While such worlds often intersect within larger webs of globalisation – and, in this case, economic sanctions – their intersections rarely culminate in such direct encounters. The Revenant Caves is a site where these tensions – between leisure and work, wealth and poverty – come to a head. Although the arena lies under the veneer of computer code and pixelated dungeons, the hostilities and consequences are embedded in the material world. Recognizing this connection between digital spaces and 'real' life broadens the conversation about their myriad of entanglements. Are these battles political? How might they reinforce or challenge entrenched power imbalances? Was this an environmental struggle? And if so, how can we study it?

The Digital Environment

Situating the 'digital' in existing conceptual frameworks centred on materiality has been an uneven process among scholars adjusting to a world increasingly mediated by digital spaces. For example, in debates on the theme of 'extractivism', or the processes of natural resource extraction, scholars have introduced the concept of 'digital extractivism', deploying the same analytical tools used to study mining and oil welling to understand processes of exploitation happening online. These include activities such as personal data extraction (Sadowski 2019), cryptocurrency mining (Rosales 2019), and videogame gold farming (Gago and Mezzadra 2017), as in the case of RuneScape. There has also been pushback against treating the 'digital' with the same frameworks and rigour as the material. For example, Chagnon et al. (2021, 177) note that Antonio Gudynas, a highly influential scholar in extractivism, "maintains that expanding the concept of extractivism beyond the realm of natural resources [...] is detrimental to the analytical and descriptive power of the concept, and thus undermines the search for alternatives." The authors counter this position, arguing for the legitimacy of the concept by "contemplat[ing] the forms of violence that result from the progressively intricate knots that digital technologies weave into different formations of extraction and accumulation" (Chagnon et al. 2021, 178). This type of material violence can be seen in the case of Venezuelan gold farmers, whose exploitation – from the devaluation of their time, to brutally tedious labour and targeted harassment – benefits wealthier gamers.

Various Marxian scholars draw similar conclusions to Chagnon and colleagues' call for situating the 'digital' in concepts previously reserved for material processes and relations. Patricia Wang (2006, 1) notes that "virtual gaming economies embody and reproduce real patterns of capitalist structures of labor." One need not look further than Old School RuneScape to see the emergence and reification of patterns and processes such as commodification, offshoring, and alienation. Moreover, Nicholas Yee (2006) emphasises how institu-

tional structures of racism, which are usually associated with 'real world' processes, have been "re-mapped" onto the virtual world. Thus, as Richard Heeks (2010) outlines, players such as Venezuelan gold farmers are subject to treatment that parallels (although to a far subtler degree) that of legal and illegal immigrants in the real world: verbal abuse, reporting, workplace raids (server disruptions), deportation (account banning), and being targeted for attacks ('player-killing'). Ge Jin (2006), writing about a competing MMORPG 'World of Warcraft', advances this analysis, claiming, "[...] gold farmers are in some sense a new kind of immigrant workers, disembodied through the Internet, then reembodied on a foreign territory as the mythical warriors, magicians or priests – virtual bodies that are the bread earners for real bodies." Here we can clearly see that the happenings in Gielinor are not independent of power asymmetries in the 'real world' – uneven capitalist and imperial relations shape and are in turn shaped by digital interactions in OSRS. This amounts to an urgent need to take these interactions seriously, and to analyse them with the same academic rigour and tools previously reserved for the 'real world'. Further, it forces us to earnestly reckon with the spaces where this takes place: the dungeons and castles that connect players from all corners of the globe.

McKenzie Wark's (1994) *Third Nature* offers a way forward to conceptualising the digital environment of Gielinor. Summarising her term 'third nature', she writes, "second nature, which appears to us as the geography of cities and roads and harbours and wool stores is progressively overlayed with a third nature of information flows, creating an information landscape which almost entirely covers the old territories" (Wark 120). Rather than a nature of rooted 'places', third nature exists in the realm of flows and terminals; it is a fusion of first nature – the 'natural world' and its physical laws – and second nature that is constantly evolving, and with it, endlessly shifting our understandings of what the natural world is and how we relate to it. Further, it is a site where power is exercised to shape these understandings. Old School RuneScape may be understood as existing in the realm of third nature since it is a landscape of information flows, built on top of and heavily influenced by – and simultaneously changing our perceptions of – the geographies of second nature. This isn't an arbitrary move; there are implications for environmental politics by envisioning these spaces as existing within third nature. While Wark (122) characterises the state of green politics as beginning "where one can experience the transformation of nature into second nature," she continues to outline how a level of scale of analysis is lost in this approach. She deploys an example of a group based in Sydney protesting new development atop harbourside bush, concluding that, "what may be saved is rather the sign of nature than nature itself" (Wark 123). Wark, in other words, is cynical about the capacity of these politics to grapple with climate change only from the levels of first and second nature. Hence, she questions how to proceed with a more holistic critique that includes third nature, and explores how videogames could be used as a tool towards this end.

Wark wrote at a time when computer games were in their infancy. To ground her arguments, she uses a videogame called SimEarth, a program that simulates Earth's habitability across aeons based on custom scenarios. Although this game is dissimilar to RuneScape, we can reach analogous conclusions. Wark (127) writes: "the significance of the parable of SimEarth for me is that the program is a highly abstract interactive parable in itself which presents at a human scale a very abstract narrative idea." We can apply her reasoning to RuneScape. Highly abstract narratives such as capitalist extractivism are presented at a scale potentially comprehensible to the player. The effects of uneven capitalist relations and a racially-differentiated system of labour are uniquely laid bare for players to see and feel while navigating through Gielinor. These relations are inherently environmental insofar as the logics of maximisation that undergird the exploitation of labour (in this case, Venezuelan gold farmers) undergird the crisis of unsustainable exploitation of resources and ecologies.

Thus, the Venezuelan Mafia contesting the Reign of Terror is not only an abstract virtual battle, but also partially the result of the internal contradictions of capital accumulation revealing themselves at a tangible scale. The battle was not only symbolic, but also took the shape of

political and environmental contests. Adhering to this line of reasoning, Wark (129) calls for a green politics that explores the "new terrain of perception and communication." She justifies this approach, explaining, "the global limit to the particular and contingent projects of modern development only appear at a more abstract level, where the space of the Earth becomes mapped and modelled by abstract sciences, relying on abstract vectors of perception" (129). Some Venezuelan gold farmers may indeed feel the limits of imposed projects of modern development. In fact, the informant for Slate who recounted that Old School RuneScape was a lifeline to survival lived only six miles away from the one of the world's richest oil reserves (Weiss 2021). Perhaps an abstract vector of perception freed of spatial contiguity, such as the environment of RuneScape, is one such arena where these global incongruencies neatly show their face. Although a fight in the Revenant Caves won't begin to chip away at histories of colonialism, economic sanction, corruption, rentierism, hyperinflation, etc., it is a space where environmental politics happen and become visible, and where the outcomes have tangible consequences.

Methodological Implications

The extractivist and Marxian scholars discussed in the previous section do the valuable work of devirtualising the digital and connecting online processes to material phenomena. McKenzie Wark's 'third nature' offers an analytical tool to present digital spaces with great political utility. These strains of thought urge readers to take the digital, including spaces such as Old School RuneScape, seriously. Given this context, how might an academic study approach the anthology of worlds colliding digitally and capture as much of the reverberations that extend beyond the computer as possible? More-than-human methodologies, such as material semiotics, are well-positioned to take on these contestations effectively. Science and technology studies (STS) scholar John Law (2019, 1) defines material semiotics as follows:

a set of tools and sensibilities for exploring how practices in the social world are woven out of threads to form weaves that are simultaneously semiotic (because they are relational, and/or they carry meanings) and material (because they are about the physical stuff caught up and shaped in those relations).

Here, 'the physical stuff' – including non-human material *actants*, to borrow the term from actor-network theory (see Latour 1993) – is recognised as having agency, as engaging in an interplay with the semiotic, and as both shaping and being shaped by meanings. The potentials for these theoretical tools and sensibilities are enhanced if the 'material' here is then expanded to the 'digital' – and not just in the sense of the physical servers hosting RuneScape, but the space of information flows and the actual environment of Gielinor. Was the battle over the Revenant Caves enabled by the game designers? Was it premeditated by the people involved? Perhaps to a degree, but only by dealing with the more-than-human can the full context of the battle be understood. An indefinite network with countless actants – internet connectivity, inflation, structural racism, leisure time, clan forums, 'histories of IT engineering' (to quote Haraway 2008), etc. – participated in the fight. These actants include the environment of RuneScape, where the Revenant Caves shape the battles fought over them just as much as the players and game designers shape the Caves. The result of the battle then reverberates across all of the webs that enacted it. Law (2019, 1) continues to underline the utility of material semiotics, writing that it is used to explore heterogeneous material and social webs and, among others:

the multiplicity of the different realities that they enact; how they interact, conflict with, or ignore one another; how they colonise or are colonised by other webs; how they produce domination; and how such forms of domination might be resisted. (original emphasis)

This lens begins to give us a clearer picture of what happened in the Revenant Caves. We can see a multiplicity of different realities enacted by the Caves, from precarious work to exciting gaming. We can see how these realities interacted and resulted in domination – the layout of the caves, with various chokepoints and blindspots, allowed for Venezuelan gold farmers to be extorted. And, of course, we can see how this was resisted in a week-long videogame battle.

This is just a cursory example of what more-than-human methodology has to offer the type of phenomena discussed in this paper, with numerous other avenues to explore. For example, Latour's (1993) *quasi-object* and *quasi-subject* can be

deployed to study the shifting and empirical boundaries between RuneScape players and their 'non-human' avatars, to muddy the separation between humans and non-humans. Further, RuneScape can be treated as a case study to understand larger actor-networks. As networks tend to 'explode' with infinite connections, the neatness of this space can present the researcher with a useful simplification to help in the contentious work of *punctualising* (Law 1992), or invisibilising parts of the network to make it comprehensible for analysis. With certain provisions in mind – such as expanding non-human material actants to the digital – the methodological toolkit of material semiotics can undoubtedly guide us towards a better comprehension of digitisation. In turn, these spaces, or third nature, have been shown to demystify abstractions. Accordingly, RuneScape may allow for a more comprehensive understanding of networks which spill beyond the virtual, so that they may be more effectively challenged or strengthened.

Conclusion

We may have only hit the tip of the iceberg in terms of the digitisation of our everyday lives. From remote working, AI integration, cryptocurrency and blockchain technology, to sensational projects of Web3.0 and metaverses, more and more interaction is shedding its spatial contiguity and taking place online. Is this solely human ingenuity on display? Are we so eager to fall into the same trap of modernity, to presume us humans as metaphysically superior to all that is 'digital', just as we do with 'nature'? In a call for humility, we must recognise that we are not, and never have been in full control (see Latour 1993). The 0's and the 1's, the flows of information in digital spaces, also do work upon us. Recognising this is a first step towards designing better technology for human, and indeed more-than-human, flourishing. Further, it opens up the possibility of realising that what happens online should not be treated as human activity in a vacuum, but rather as caught up in networks that include non-humans and extend well beyond the virtual. The digital space is often overlooked in extractivist discussions, environmental politics, and academic discourse. However, as illustrated by the example recounted in this paper, it is a space where power asymmetries articulate themselves in dramatic and very *real* ways, and where the abstract networks in which we participate may appear most lucidly.

References

Ammous, Saifedean. 2018. "Can Cryptocurrencies Fulfil the Functions of Money?" *The Quarterly Review of Economics and Finance* 70: 38-51. 10.1016/j.qref.2018.05.010.

Aronczyk, Amanda, and Erika Beras. 2021. "Video Gaming the System." *NPR Planet Money,* July 21, 2021. https://www.npr.org/2021/07/21/1018915121/video-gaming-the-system.

Chagnon, Christopher W., Sophia E. Hagolani-Albov, and Saana Hokkanen. 2021. "Extractivism at your fingertips." In *Our Extractive Age: Expressions of Violence and Resistance,* edited by Judith Shapiro and John-Andrew McNeish, 176–188. London: Routledge.

CoinMarketCap. n.d. "RSGPcoin to USD Chart." Accessed November 15, 2022. https://coinmarketcap.com/currencies/rsgpcoin/.

Freedom House. 2012. "Freedom on the Net 2012 – Venezuela." Last modified September 25, 2012. https://www.refworld.org/docid/5062e893c.html.

Gago, Verónica, and Sandro Mezzadra. 2017. "A Critique of the Extractive Operations of Capital: Toward an Expanded Concept of Extractivism." *Rethinking Marxism* 29(4): 574-591. https://doi.org/10.1080/08935696.2017.1417087.

Good, Owen S. 2017. "Gold farming gets Venezuelans Targeted in Old-school Runescape." *Polygon*, September 10, 2017. https://www.polygon.com/2017/9/10/16283926/venezuelan-gold-farming-runescape-targets.

Haraway, Donna J. 2008. *When Species Meet*. Minneapolis: University of Minnesota Press.

Heeks, Richard. 2010. "Understanding 'Gold Farming' and Real-Money Trading as the Intersection of Real and Virtual Economies." *Journal of Virtual Worlds Research* 2(4). https://doi.org/10.4101/jvwr.v2i4.868.

Jin, Ge. 2006. "Chinese Gold Farmers in the Game World." *Consumers, Commodities & Consumption* 7(2). https://csrn.camden.rutgers.edu/newsletters/7-2/jin.htm.

Latour, Bruno. 1993. *We Have Never Been Modern.* Cambridge, MA: Harvard University Press.

Law, John. 1992. "Notes on the Theory of the Actor-network: Ordering, Strategy, and Heterogeneity." S*ystems Practice* 5: 379-393. https://doi.org/10.1007/BF01059830.

Law, John. 2019. "Material Semiotics." Last modified January 30, 2019. http://www.heterogeneities.net/publications/Law2019MaterialSemiotics.pdf.

Ombler, Mat. 2020. “How RuneScape is Helping Venezuelans Survive.” *Polygon*, May 27, 2020. https://www.polygon.com/features/2020/5/27/21265613/runescape-is-helping-venezuelans-survive.

Rosales, Antulio. 2019. “Radical Rentierism: Gold Mining, Cryptocurrency and Commodity Collateralization in Venezuela.” *Review of International Political Economy* 26(6): 1311-1332. https://doi.org/10.1080/09692290.2019.1625422.

RuneScape Clans Wiki. n.d. “Clan: Reign of Terror.” Accessed November 15, 2022. https://runescapeclans.fandom.com/wiki/Clan:Reign_of_Terror.

Sadowski, Jathan. 2019. “When Data is Capital: Datafication, Accumulation, and Extraction.” *Big Data & Society* 6(1). https://doi.org/10.1177/2053951718820549.

Theoatrix. 2019. “[OSRS] Ultimate 1-99 Mining Guide (Fastest/Profitable/Afkable Methods).” Last modified January 10, 2019. https://www.theoatrix.net/post/osrs-ultimate-1-99-mining-guide-fastest-profitable-afkable-methods#:~:text=In%20total%2C%20getting%20from%2075,take%20you%20about%20160%20hours.

Wang, Patricia. 2006. “A Marxian Analysis of World of Warcraft: Virtual Gaming Economies Reproducing Capitalistic Structures.” Last modified December 4, 2016. http://triciawang.pbworks.com/f/marxvirtual.pdf.

Wark, McKenzie. 1994. “Third Nature.” *Cultural Studies* 8(1): 115-132. https://doi.org/10.1080/09502389400490071.

Webster, Ian. 2022. “Venezuela Inflation Calculator: VEF from 1980 to 2021.” Official Inflation Data, Alioth Finance. Last modified November 10, 2022. https://www.officialdata.org/Venezuela-inflation.

Weiss, Ben. 2021. “The Venezuelans Trying to Escape Their Country Through Video Game Grunt Work.” *Slate*, August 25, 2021. https://slate.com/technology/2021/08/venezuelans-old-school-runescape-tasks.html.

Yee, Nicholas. 2006. “Yi-shan-guan.” *Daedalus Project* 4(1): 1-18 http://www.nickyee.com/daedalus/archives/pdf/4-1.pdf.

ON OUR WAY

Words by Dušan Lovre

It's too late.

This is my mantra now. Inhale, *too*, exhale, *late*. It keeps me going. It's much-needed proof that I am still alive. A younger, more idealistic version of me would never have accepted this. I would have kept fighting, kept believing. I would have kept hoping. Suddenly, I'm reminded of a quote - *everything will be okay in the end. If it's not okay, it's not the end.* As it turns out, the end has degrees of finality. For some reason, I find this realization utterly hilarious. I burst out laughing, a lone lunatic to anyone who can see me, but there are no able witnesses around, and the world I inhabit does not laugh back.

It is the end, and it is not okay. Ideas are dead. So, too, is the younger, more idealistic version of me. Everything is.

We all saw it coming, but comfortably tucked into our ignorance by choice, we brushed it off. The fear was there, yet we didn't do anything. Not when the fires wouldn't stop for years, then decades; not when the bees disappeared, and the crops withered; not when starvation tore us apart. Up in the north, we thought we were fortunate. It was always happening to someone else, something else, someone too far away to care about, something unworthy of empathy. And so, we figured we could stave it off, avert it. Business as usual.

Now I understand we were delusional, and I am left wondering what being fortunate really means. My laughter comes again, out of nowhere, an outpour. This time my voice echoes, and what comes back sounds like screaming.

A long time in the making, this final act - the Total Collapse - happened fast. Mother Nature went berserk. At first glance absolute chaos, the end of our world was masterfully conducted, a virtuoso performance. The oceans reunited, the water reclaiming the soil, the dirt; the filth, *our* filth.

Terrestrial life suffocated. Saline water organisms found the new environment too fresh to live in. With freshwater beings it was the opposite. The other, more flexible lifeforms quickly starved. Indifference kills too.

Nothing matters anymore.

Well, maybe Bamboo does. Maybe it is the only reason I am still here, stubbornly navigating into nowhere. Disconnected thoughts roam through my mind. I think of life—Life. I realize Bamboo and I might be the only remaining instances of it.

It's only water now, heaps of it. Non-living, dark and cold.

And the two of us.

I named it Bamboo. It seemed appropriate, though I can't remember why. This happened a couple of hours, or days, or years, or lifetimes ago. When space stops making sense, time does as well. Bamboo was swimming, or rather trying to swim through a tangle of organic and synthetic waste, ready to surrender and sacrifice its flesh to the endless floating pile. But then it saw me, and I caught the look in its eyes. It wasn't merely the look of a desperate drowning animal about to be saved and discovering new hope, no. It was a look, the look, that held all the wisdom and purpose of existence, the look that stripped away all delusions and misconceptions in the beautifully evident truth – *I am not alone. We are not alone.*

Never before have I felt so connected to another, an other. I pulled it out of the water and onto the raft.

We are on our way. Bamboo is still right here next to me, but it has been quiet for a while now. I don't think it is breathing.

It doesn't really matter now. I don't have much time left.

It's too late.

Contributors

Ty Tarnowski. *Board/Contributor/Editor.*
Ty holds a bachelor's degree in Geography/Environmental Studies from the University of California, Los Angeles (UCLA). He is currently pursuing a master's of philosophy at the Centre for Development and Environment (SUM) at the University of Oslo (UiO). He is interested in financialization of nature, and in digital infrastructure.

Marit Bye Gjermshus. *Board/Editor.*
Marit holds a bachelor's degree in international studies from the University of Oslo (UiO), where she is currently pursuing a Master of Philosophy at the Centre for Development and Environment (SUM). She is interested in the power dynamics of global governance and how intellectual property rights intersects with politics of development and environment.

Angelique Rein. *Editor.*
Angelique, from the US, is a master's student of Development, Environment, and Cultural Change at the University of Oslo and holds bachelor's degrees in Business Administration and Japanese Studies from Carnegie Mellon University. She is interested in green societal transformation, including vegan transitions, reduced consumption, and degrowth.

Jessica Le Riche. *Contributor/Editor.*
Previous background in the Humanities with a Bachelor of Arts in English Literature and Film, now a student at the Centre for Development and the Environment at University of Oslo studying for a master's degree in Development, Environment, and Cultural Change. Interests include literature, film, environmental humanities, ecology, and environmental philosophy.

Holly Benna. *Editor.*
Holly holds a bachelor's degree in Sociology, Environment & Society from the University of British Columbia (UBC). She is currently pursuing a master's of philosophy at the Centre for Development and Environment (SUM) at the University of Oslo (UiO), with an interest in movements for climate justice and the politics of forest management in Canada.

Elida Lenth. *Editor.*
Elida holds a bachelor's degree in German and History from King's College London and is currently at UiO, pursuing a master's in Development, Environment and Cultural Change. She is interested in ideas around deep ecology, environmental humanities, social constructivism and cultural hegemony.

Ingrid K. Forsberg. *Editor.*
Ingrid holds a bachelor's degree in Culture and Communication from the University of Oslo (UiO), and three years of law studies from the University of Bergen (UiB). She is currently enrolled in the master's program Development, Environment and Cultural Change at UiO, and is interested in legal responses to climate change.

Helene Kamfjord. *Contributor/Editor.*
Helene holds a bachelor's degree in International Environment and Development Studies from the Norwegian University of Life Sciences (NMBU). She is currently enrolled in the Development, Environment, and Cultural Change master's program at SUM, where she is writing her thesis on illegal e-waste trade, ecomafia, and green criminology

María de los Ángeles Ochoa. *Board/Editor.*
María, from Mexico, holds a Bachelor's Degree in History, and she is currently pursuing a Master's Degree in Development, Environment and Cultural Change at the University of Oslo. She is investigating how social movements are defending their right to electricity. As a passionate dancer, she has been studying new methods to foster environmental awareness through movement.

Mikayla Marazzi. *Contributor/Editor.*
Mikayla writes a lot of prose: previously, while getting a BA in English Literature; recently, as a professional grant writer; currently, enrolled in the UIO masters program "Development, Environment, and Culture Change"; and sometimes, as a creative nonfiction writer. She is interested in multispecies studies, the human-animal relationship, and non-human agency.

Austra Apsite. *Contributor/Editor.*
Austra comes from Latvia and holds bachelor's degrees in Philosophy and English Literature from the University of York in England and is currently studying for a master's degree in Development, Environment and Cultural Change at the University of Oslo. She has a particular interest in ethics, phenomenology, mountains, forests and oceans.

Eira Elisabeth Lien Jacobsen. ***Editor.***
Eira holds a bachelor's degree in social anthropology from the University of Oslo. She is currently pursuing a master's of philosophy at the Centre for Development and Environment (SUM), where she is engaged in questions of standardization, control and care in animal husbandry. Her thesis explores domestication through and against collectivised systems of tracing genetic value in Norwegian sheep breeding practices.

Wanxian Zhang. ***Editor.***
Wanxian holds a bachelor's degree in Anthropology and is currently a master's student at the Centre for Development and Environment (SUM) at the University of Oslo (UiO)

Dušan Lovre. ***Contributor/Editor.***
Dušan is a software developer living in Oslo, writing computer code for fun and money, and fiction for all the other reasons.

Emilija Barteškaite. ***Contributor.***
Emilija is a final year Integrated Master's in Biology student at the University of St Andrews, Scotland. She is writing her dissertation on the evolution of altruism in viscous populations. In her free time, Emilija enjoys reading fiction, dancing, playing tabletop games, and spending time in nature. She was born and raised in Vilnius, Lithuania, and is very proud of that.

Toril Finbråten. ***Editor.***
Toril holds a bachelor's degree in Global Development studies from the University of Agder (UiA). Currently, she is in her first year of the master's program; Development, Environment and Cultural Change at the University of Oslo, with an interest in socially just green transformations.

Ana De Luca. ***Contributor.***
Ana is a Researcher and Professor at the Faculty of Science at the Autonomous University of Baja California.

Daniel Fuller. ***Contributor.***
Daniel Fuller has been writing poetry since the age of 12. Born and raised in England, he has spent time living on Darug country (Sydney), in the lands now known as Australia, and is now based in Oslo, Norway. Each of these places has left an indelible print on his work. He draws inspiration from land and country as well as the deeply personal and relational. His work has been published in Yes Poetry, The Madrigal and The North Magazine, and was shortlisted in the 2020 Bridport Prize.

Wanxian Zhang. ***Editor.***
Wanxian holds a bachelor's degree in Anthropology and is currently a master's student at the Centre for Development and Environment (SUM) at the University of Oslo (UiO)

Magnus Hole Fjetland. ***Contributor.***
Magnus is currently pursuing the professional-track programme in Psychology and the Honours Certificate in Environmental Humanities and Sciences. He is writing his thesis about psychoanalytical perspectives on the relationship between humans and nature.

Jon Heli. ***Contributor/Editor.***
Jon completed his master's in Social Anthropology at the University of Bergen (UiB) in 2022. The master's thesis focused on how nationalist narratives were produced in the Tokyo Olympics. Nowadays, however, Jon wants to find ways to reconceptualize human-nature relationships inspired by indigenous peoples' knowledge and phenomenological approaches.

José Luis Lezama. ***Contributor.***
José is an Emeritus Researcher and Professor at the Interdisciplinary Program of El Colegio de México.

Jonathan Payne. ***Editor.***
Jonathan is a teacher and writer living and working in London, UK. He has a BA in English Literature and a Master's degree in Education from the University of Cambridge. He teaches English Literature at GCSE and A Level and writes poetry and prose.

Lucía Aragón. ***Illustrator.***
(1988. Culiacán, Mexico) is an artist who is influenced by her Mexican heritage and her surroundings in Norway. She studied Visual Arts at Interlochen Arts Academy (USA), obtained a Bachelor Degree from Universidad Iberoamericana (MEX) and a Master Degree from Kunsthøgskolen i Oslo (NO). She works primarily between the mediums of site-speciphic paintings, light, printmaking and drawing. Aragón's art practice explores the merging of cultures, memories and myths. Her artwork has been exhibited in solo and group exhibitions in Norway, Mexico, USA, Poland, Greece, Austria and Finland.

Mira Guth. ***Board/Editor.***
Mira holds a bachelor's degree in the Science in Society Program at Wesleyan University. She is currently pursuing a master's of philosophy at the Centre for Development and Environment (SUM) at the University of Oslo (UiO). Her thesis is focused on the role of veterinarians in the emerging global health crisis of antimicrobial resistance (AMR).

Olive Bieringa. ***Contributor.***
Olive Bieringa is a dance, performance and visual artist working at the intersection of social and creative practice, pedagogy, and healing based in Oslo. She is a certified Teacher of Body-Mind Centering®. She directs the Body-Mind Centering Somatic Movement Education certification at SEA in Melbourne, Australia. Together with Otto Ramstad she creates work as BodyCartography Project making performances, films, installations and workshops. She is currently a Doctoral Candidate in Dance at UniArts, Helsinki.

Sofie Van Canegem. ***Contributor/Editor.***
Sofie Van Canegem holds a master's in Law from the University of Leuven and a master's in Public International Law with specialisation in Environmental and Energy Law from the University of Oslo. She has written multiple climate-related articles for, amongst others, Tvergastein.

Wouter de Rijk. ***Contributor.***
Wouter is a research master's student in Political History at Leiden University in the Netherlands. His research interests revolve around the twentieth-century re-arrangement of society and the contemporary challenges that arise from this.

Andrew Turner Poeppel. ***Board.***
Andrew holds a bachelor's degree in environmental and urban studies from New York University. His research interests include the history of environmental movements, ecological awareness in cities, and contemporary environmental philosophy. He is currently pursuing a master's degree in Development, Environment, and Cultural Change at the University of Oslo.

Bendik Sivertsen. ***Contributor.***
Bendik Sivertsen is a biologist with a deep interest in community ecology. He is currently finishing his Master's degree in Biosciences at the University of Oslo and has extensive experience surveying endangered plant species and nature type distribution for Miljødirektoratet. He is also a seasonal skier and occasional climber.

Tvergastein 2023