

e-ISSN 2785-2709

Lagoonscapes

Venice Journal
of Environmental Humanities

Vol. 2 – Num. 1
June 2022



Edizioni
Ca'Foscari

e-ISSN 2785-2709

LagoonScapes

The Venice Journal of Environmental Humanities

Editors-in-Chief
Stefano Beggiora
Serenella Iovino

Edizioni Ca' Foscari - Venice University Press
Fondazione Università Ca' Foscari
Dorsoduro 3246, 30123 Venezia
URL <https://edizionicafoscarì.unive.it/it/edizioni4/riviste/the-venice-journal-of-environmental-humanities/>

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Semestral journal

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Publisher Edizioni Ca' Foscari | Fondazione Università Ca' Foscari | Dorsoduro 3246, 30123 Venezia, Italia | ecf@unive.it

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THE NEW INSTITUTE Center for Environmental Humanities at Ca' Foscari University of Venice gratefully acknowledges the support of THE NEW INSTITUTE Foundation gGmbH. The first three issues of *LagoonScapes* were published with the support of Banca d'Italia.

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URL [https://edizonicafoscari.unive.it/it/edizioni/riviste/
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**Humanities, Ecocriticism
and Multispecies Relations.
Proceedings (part II)**

edited by Deborah Nadal and Eleanor Peers

Learning with Others: Multispecies Relations Across Time, Space, and Crisis

Deborah Nadal
University of Glasgow, UK

Eleanor Peers
University of Cambridge, UK

This issue concludes the journey – physical, psychological, emotional, and, as scholars, intellectual – that started in Spring 2020 with the preparation of the international conference, *Humanities, Eco-criticism and Multispecies Relations*, hosted by Ca' Foscari University of Venice, Italy, on 28-29 September 2020. The organisation of this meeting began during the peak of the first wave of the COVID-19 pandemic, when little was known about SARS-CoV2. Even less was known, of course, about our reaction as humans to “this thing that has happened to us”, as the novelist Arundhati Roy described in her famous piece “The Pandemic Is a Portal”, which appeared in the *Financial Times* in April 2020:

Whatever it is, coronavirus has made the mighty kneel and brought the world to a halt like nothing else could. Our minds are still racing back and forth, longing for a return to “normality”, trying to stitch our future to our past and refusing to acknowledge the rupture. But the rupture exists. And in the midst of this terrible despair, it offers us a chance to rethink the doomsday machine we have built for ourselves. Nothing could be worse than a return to normality.

Historically, pandemics have forced humans to break with the past and imagine their world anew. This one is no different. It is a portal, a gateway between one world and the next. We can choose to walk through it, dragging the carcasses of our prejudice and hatred, our avarice, our data banks and dead ideas, our dead rivers and smoky skies behind us. Or we can walk through lightly,

with little luggage, ready to imagine another world. And ready to fight for it. (Roy 2020)

This issue presents a series of multispecies ethnographies, which show how worlds in the past, present, and future are discovered, created, understood, or imagined with non-human others. Multi-species ethnography is a way of doing anthropology – and cognate fields – that acknowledges the interconnectedness and inseparability of humans and other life forms, extending ethnography beyond the human. When multispecies investigations first appeared 12 years ago (Kirksey, Helmreich 2010), they brought the ‘animal turn’ into the practice of ethnographic fieldwork. Nowadays, discussions are not limited to human and non-human animals, but include plants, minerals, microorganisms, viruses, and so on. Multispecies investigations remain ethnographies of relations. They look at the elements of a given assemblage as subjects, in their own way, of a rapport where humans are no longer at the centre, and no longer an exceptional species. These assemblages along with their elements are sites for ‘becoming with’, in Donna Haraway’s (2008) sense: the subjects within them emerge through their shifting encounters, rather than existing prior to their meeting (Haraway 2008). And from February 2020 none of us could escape or expel a new addition to the amalgamations within and without our bodies – SARS-CoV2.

Thus, we met to discuss our various examples of multispecies interrelations at a time when our own lives were being collapsed into our scholarly writing. There was no way we could sustain any boundaries between human and non-human, intellectual and material, theory and practice, or academic work and the rest of life. A tangle of proteins, indexed visually as a faceless ball covered in suckers, was coursing through human and animal bodies, re-shaping society, ecology, place, and work. We could not but be aware that we were living the multispecies agglomerations we were describing in our various ethnographic case studies. And yet we continued to invoke conventional boundaries in our presentations, as we delineated our respective fieldwork sites and theoretical approaches. The institutions within which we work and study would not have accepted anything different, even if we had had the time and space to formulate it. The rapidly changing global context had created a mismatch between our scholarly intention to engage with the fact of interspecies relationship, and our immediate experience of it. Hence, our work stands as a point in an ongoing transition: it is one marker within global scholarship’s continuing passage through the pandemic’s portal. It displays the conventions and paradigms of the pre-pandemic world, as it documents the conflux of multispecies relationship that is carrying us into an unknown future.

When the conference finally took place, it was the only one held in person at the University of Venice that summer, before the second wave of infection struck Italy – and many other countries – again. At that time, at least 35,720,249 people around the world – the confirmed cases – had encountered SARS-CoV2. The first issue of this series, titled *Humanities, Ecocriticism, and Multispecies Relations. Proceedings (part I)*, was published in December 2021, just before the global infection rate skyrocketed again, reaching its highest number of daily cases (23,278,336 on 17 January 2022), so far. As we, the editors of this second and last issue dedicated to the conference, write its introduction, we are slowly recovering from the first passage of SARS-CoV2 through our bodies. We are likely to have encountered its Omicron BA.5 variant that, compared to the previous variants of the virus, is less likely to cause severe disease, but which is more interested in infecting a high number of individuals – at least in the human population.

For most of the two and a half years that have passed since the first human case of COVID-19 was reported on 31 December 2019, topics such as the use of masks, social distancing, lockdown, and vaccination have occupied most of the pandemic-related debate that has occurred in our houses, roads, TVs, social media, and academic papers. But at the beginning, before our focus as humans moved on to how to protect ourselves and the most fragile amongst us from infection, all our attention was outside our species. It was on what other animal, or animals, SARS-CoV2 had come to us from, and how, when, and where the spillover happened. Before then, a handful of researchers, and the readers of the much-acclaimed book by David Quammen (2012), *Spillover. Animal Infections and the Next Human Pandemic*, were familiar with this term. In December 2019, many became aware, for the first time, of species such as pangolins and civet cats, the superstar immune systems of bats, and the impact of human actions on ecosystems – and hence on the co-existence of different species. Then, as the pandemic and its concomitant research expanded, people followed with apprehension the discovery of the three dozen non-human animal species – dogs in houses, minks in fur-farms, tigers in zoos, white-tailed deer in woodlands – who can also be infected by SARS-CoV2 (VandeWoude, Bosco-Lauth, Mayo 2022). According to the U.S. Centers for Disease Control and Prevention, while the risk of animals spreading COVID-19 to people is low, several cases of animals infected with SARS-CoV-2 have been documented around the world.

As the discussion of inter-species disease transmission confronted many with the complexity of multi-species interconnection, so the experience of national lockdowns in many countries disrupted citizens' affective perception of space and place. People rediscovered their localities – including the animals, birds, rivers, and trees of their im-

mediate vicinity – as simultaneously they developed new worlds of mediated contact via a proliferation of virtual meeting technologies. This reconfiguration of place, ecology, and inter-species connection exposed for many the reality of the climate crisis. It was impossible to miss the marked improvement in air quality and auditory ambience, as birdsong replaced the noise of cars, railways and airplanes. The essayist Zadie Smith (2020) has described 2020 as “the global humbling”, or the moment people collectively realised that our pre-COVID-19, ‘normal’ life was probably more similar to a bad habit than to a model of life we really want for ourselves. It can be argued that COVID-19 has opened many people’s eyes to issues, such as the human exploitation of the environment and other life forms that have long been part of our pre-COVID-19 status quo. Unfortunately, it is not clear yet whether this realisation is going to last long enough to resist the temptation of going back to ‘business as usual’, rather than turning into concrete actions that put our future on a healthier, safer, happier, and fairer track. As far as justice is concerned, the forthcoming books *The Promise of Multispecies Justice* (Chao, Bolender, Kirksey forthcoming) and *More-than-One Health. Humans, Animals, and the Environment Post-COVID* (Braverman forthcoming) will elucidate the difficult intersection of social justice with the lives of non-humans, while exploring the possibilities for achieving human and non-human justice and health.

According to the results of the *World After Covid* project at the University of Waterloo,¹ which asked scientists to reflect on the positive and negative societal or psychological changes that might occur after the pandemic, increased care for nature ranks only eighth out of the twenty main positive consequences of our encounter with SARS-CoV-2. While this can be considered a worrying signal, it should also be observed that many environmental issues are actually societal ones; they originate with humans’ relationship with the environment. One example is Russia, as it currently exists under Vladimir Putin’s regime. The worst recorded forest fires in human history raged in Siberia and Arctic Russia throughout the summer of 2021 (Davydova 2021). These fires manifested the incompetence and corruption of the federal political elites, through demonstrating the absence of crucial fire-fighting resources. Instead, the populations of historically marginalised and colonised regions were forced to fight the fires themselves, in order to save their villages and livelihoods.

In the *World After Covid* project, the top three positive consequences were identified as renewed social connections, structural, and political changes, and solidarity. Even if these three tendencies are not directly related to how we share our existence with

¹ <https://worldaftercovid.info/>.

other life forms, they are relevant to non-human life. For example, the philosopher Valerie Tiberius from the University of Minnesota suggested that the pandemic may lead to an “increased awareness of our vulnerability and mutual dependence”.² Two and a half years ago, we realised – we experienced through our tired lungs and numb tongues – that this dependence is multispecies. Since then, we have been learning how to go through a pandemic not only as individuals and members of a local and global community, but also as elements of a multispecies system. If this is the case, then multispecies research has acquired a new power to mobilise change, through documenting and demonstrating the different configurations of multispecies relationship that have existed across time and space. Multispecies ethnography has become a call to action.

None of the papers in this issue is about the pandemic, although one of them does focus on the theme of health. Most of this research was started before the pandemic, and hence its arc encapsulates the transitions the pandemic has engendered. What these papers have in common is their presentation of short ethnographic accounts of multispecies relations that are simultaneously unique and profound learning experiences – at least for one of the species involved (humans). The multispecies relationships in this issue trouble conventional materialisms, confronting us with the agency of water beings, non-human ancestors, and articulate rocks. The order of the papers in the issue is geographical; it starts in Venice, where the conference was held, and travels the world eastwards. This geographical ordering reflects the power of multispecies relationships to configure inhabited spaces and places, which is clearly demonstrated by all the papers in the issue. The journey eastwards also mimics many of the colonial journeys that inform these papers and their settings: unequal power relations between humans are a key component of these multispecies relations, as we have indicated above.

In the landscape of Sápmi, in the Scandinavian peninsula, De Vivo describes the resistance, despite enforced conversion, of the collective memory of the interactions of Sámi people with other-than-human beings in Indigenous toponyms. Placenames are protected and valued as strongholds to help young Sámi know how to navigate their land and their history – and meet, through oral tradition and culturally-situated practices, the other-than-human beings that centuries of colonisation have tried to remove from local multispecies relations. In India, Nadal explores three examples of community-led debate and action on One Health, an expression coined in 2004 to acknowledge that the health of humans, animals, plants, and the environment are closely linked and inter-dependent. The examples

² <https://worldaftercovid.info/interviews/valerie-tiberius-2/?timestamp=0>.

show how, long before this phrase appeared in the scientific language, local human communities developed well-studied strategies to safeguard health – the health of themselves, their environment, and the other animals of the locality – together with, respectively, trees and antelopes, vultures and the sun, and cattle. In the Russian Arctic, Vallikivi follows some families of Nenets reindeer herders on a journey that is at the same time physical (through the Great Land tundra), and spiritual – between ‘the old ways’ and the most recent dissemination of evangelical Christianity. He investigates how this conversion transforms the lived experience of multispecies relationship among nomadic herders who, when crossing the tundra, come across the invisible agents who inhabit its waters and its mountains, but with whom they are no longer allowed to interact. In Siberia, Peers follows the public reaction among the Sakha people to the display of an ivory model of an ancient Sakha festival, produced for the Paris Universal Exhibition in 1867. She uses the ambiguous absence or presence of horses in this model to demonstrate the interconnection between varying configurations of multispecies relationship, and aesthetic expression.

In Australia, Tamisari analyses how the Yolngu people express their mutual life-giving bonds with other-than-humans such as animals, plants, natural features, and land in terms of kinship relationships. Young Yolngus, and the adopted anthropologist herself, are taught reciprocal responsibility, interdependence, cooperation, care, and other basic social skills, through the ‘mutuality of being’ among living beings. Her piece echoes Peers’ discussion of the aesthetic dimension of multispecies relations, through her description of new expressions of multispecies relationship in contemporary popular music. In the Paraguayan Chaco, Bonifacio and Maresca describe how the colonisation of two regions unfolded through multiple, unpredictable, and precarious combinations of people, cattle, and grazing lands. The transition that occurred over the twentieth century was not only temporal, but also ontological: it was characterised by the disappearance of certain beings and the assemblages they were part of, and by the coming to life of new ones. In the Fiemme Valley, Italy, Martellozzo investigates the aftermath of the storm that hit the area in 2018 and profoundly changed the physical landscape, describing peoples’ lost familiarity with what has gone, and their attempts at negotiating new forms of coexistence with trees, mushrooms, insects, and atmospheric patterns. Faced with this transformation, the challenge for the human community is to understand how to take part in it, renouncing the illusion of control derived from the anthropocentric perspective. Along the Piave River, Italy, Breda meets stone gatherers and is introduced to the pebbles and rocks they collect for the limestone industry as living beings. By examining the relationship between humans, stones, and the river water, the author de-

scribes the human attribution of subjectivity, intentionality, ability, and agency to non-humans, specifically to the water, which provides 'good' or 'bad' stones and imbues the local ecosystem with economic and cultural meanings.

All these papers demonstrate that the lives of humans, other-than-human animals, weather and landscape are intrinsically connected – as we have discovered for ourselves from the pandemic, in addition to our field trips. So far, people who have adopted a multispecies perspective in their work, in and out of academia, have fulfilled the tasks of portraying this evidence and creating a space for it in public discussion. Multispecies perspectives afford the intricate and accurate analysis of the pandemic, and its far-reaching effects. Now, especially in the crisis-ridden world we are witnessing at present, we need to practically engage with local multispecies knowledges, if we are to change the way we live our present, and secure our future.

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“Everybody Knew Čuoppomáddu Stories”. On Human/Other-Than-Human Relations in Stuornjárga as Revealed Through the Márka-Sámi Toponyms

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Abstract The Sámi people share their ancestral homeland (Sápmi, sub/Arctic Europe) not only with animals, plants, trees, rocks, colonial-settlers and more recent immigrants but also with other-than-human beings. For centuries, the Sámi have co-constructed Sápmi's landscape with these entities through respect and reciprocity. Despite enforced conversion, elements of Sámi Indigenous worldviews persisted. Enshrined in placenames, collective memory of interactions with other-than-human beings has been passed down through generations. The paper highlights the importance that toponyms have in transmitting cultural values, identity, and a sense of belonging.

Keywords Linguistic landscape. Indigenous Sámi worldviews. Indigenous Sámi values. Other-than-human entities. Márka-Sámi identity.

Summary 1 Introduction. – 2 Assimilation Through Enforced Conversion and Toponymic Colonisation. – 3 Toponyms and Stuornjárga's Collective Sámi Memory. – 4 Čuoppomáddu. – 5 Conclusion.



Peer review

Submitted 2022-03-17
Accepted 2022-05-20
Published 2022-06-22

Open access

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Citation De Vivo, E. (2022). “Everybody Knew Čuoppomáddu Stories”. On Human/Other-Than-Human Relations in Stuornjárga as Revealed Through the Márka-Sámi Toponyms”. *Lagoonscapes*, 2(1), [1-22] 15-36.

DOI [10.30687/LGSP/2785-2709/2022/01/001](https://doi.org/10.30687/LGSP/2785-2709/2022/01/001)

1 Introduction

Humans relate to the world through cultural-specific understanding of local environments. Thus, each culture has its own conceptualisation of relations with its surroundings and the other-than-human entities (i.e. animals, plants, rocks, spirits, and beings endowed with agency) dwelling there. Throughout the centuries and across the world, placenames have had the capacity of connecting people with their environment and thereby to all the beings they share the landscape with, developing what Kearney and Bradley consider an emotional engagement to the land (2009). Placenames often convey information about cosmographies and worldviews and human and non-human agents active in the area (see Basso 1996). Given their crucial role in symbolically organising both space and memory/history, placenames have become a site of conflict where power relations are evident. In colonial contexts, placenames – and the right to impose them – have emerged as powerful tools of domination alongside land-conquest and attacks on ways of knowing and understanding (Helander 2009). Given their cultural relevance and their connections with history, practices, and worldviews, placenames were a primary target of cultural eradication policies such as those implemented in Sápmi, the Sámi ancestral homeland, by the colonial authorities.

This essay aims to shed light upon relations between humans and other-than-humans in Stuornjárga, holding Indigenous toponyms as both references to past and present worldviews and as collective memories encapsulating such relations and contributing to the analysis of Indigenous Sámi placenames as repositories of meaning and historical documentation. Furthermore, it addresses toponyms as testimony of Sámi indigenous worldviews and verbal signs encapsulating Sámi Indigenous perspectives on the relations binding all entities in the world. By addressing the socio-cultural context of Stuornjárga, the essay contributes to diffusion of knowledge about the area and its hitherto little-studied specific cultural characteristics. Although the reflections advanced here, locally and temporally bounded, refer specifically to Stuornjárga, their implications hold true for the wider Sápmi context.

First I discuss Sápmi’s socio-cultural context briefly, touching upon its history of colonisation and concurrent oppression of Sámi Indigenous epistemologies, introducing some of the concepts informing my reflections: toponymic silencing and resistance. Secondly,

I would like to express my deepest gratitude to all my interlocutors, SESAM the Centre for Sámi Studies at UiT, and all the people who supported me while I was in Sápmi. I would also like to thank the editors and the external reviewers for the attention they devoted to my manuscript and for their helpful and constructive comments which greatly assisted me in improving this paper.

I address toponymic colonisation as an expression of assimilation policies, in relation to enforced conversion, examining the epistemological violence intrinsic in such practices. Thirdly, I apply my considerations to the Stuornjárga Márka-Sámi, examining the linguistic landscape as a prism through which to view human/other-than-human relationships embedded in placenames. I then focus on Čuoppomáddu – the Great Mother of Frogs – and her role and significance in Márka-Sámi culture. The conclusion draws together the threads running through the essay, underlining how toponyms function as repositories of meaning.

The Sámi people have dwelt in Sápmi for centuries as did their ancestors long before Germanic tribes settled in the southern Scandinavian Peninsula. The Sámi are today a minoritised Indigenous¹ group in each of the states cutting across Sápmi. Sámi cultures have long been stigmatised at local and state levels (Minde 2003). The Sámi have always been heterogeneous groups of people with cultural and linguistic similarities and differences. They share a cultural substratum, but internal-external processes led to the development of a cultural-linguistic continuum ranging from the Eastern Kola Peninsula and north-central Finland to southern-Norwegian/central-Swedish areas, with different lifestyles, languages, worldviews, and subsistence activities. Transversal to Sámi cultural-linguistic areas, national borders contribute to the fragmentation of Sámi cultures (Lantto 2010). Despite centuries-long Christian colonisers' conversion efforts, since around the fifteenth century (Rydving 1995; 2004), leading to the loss of Indigenous non-Christian Sámi worldviews and practices, elements of Indigenous epistemologies have persisted, shaping how Sámi relate to Sápmi's natural environment. Many Sámi placenames epitomise such relations, incorporating them into local history through the landscape. Colonial action against Sámi communities was deeply intertwined with the naming of the sub-Arctic region. The centralised colonial power, located hundreds of kilometres south of Sápmi, inexorably

¹ In Norway, Sámi self-determination has been a complex process: preceded in 1987 by the Samelov (the Sámi Act) guaranteeing to the Sámi rights to protect and develop their cultures, languages, and lifestyles, in 1989 the consultative body Sámediggi (the Sámi Parliament) was established in Kárášjohka; the Norwegian parliament amended the constitution, including § 110° paragraph, later modified in § 118°. In 1990 Norway ratified the International Labour Organization (ILO) convention 169, recognising the Indigenous status of the Sámi. This political achievement came after decades of struggle epitomised by the Alta River controversy, a turning point in relations between Sámi communities and the Norwegian State which, for almost a century, had enforced a rigid policy of structuralised assimilation (*fornorsking*, ‘norwegianization’) and state-led stigmatisation.

The term Indigenous today refers to culturally/linguistically/geographically distinct groups. Although each Indigenous community has faced unique challenges in the colonial assault to their sovereignty, they all share the experience of colonisation. Therefore, the term ‘Indigenous’ refers to both all Indigenous communities collectively and to specific Indigenous communities. Here, I will use the term with reference to the Sápmi context.

imposed itself in the North, carving its own space in the local landscape by the use of colonial names, leading to a gradual erosion of Sámi placenames. Following colonial encroachments into Sápmi, Indigenous toponyms first coexisted with new colonial placenames and were then wiped off maps although continuing in oral traditions. This colonial strategy, known as "toponymic silencing" (Harley 2001), has often been implemented by dominant/hegemonic societies in the attempt to expunge from records – and erase from history – cultural practices and histories of minorit(ised) groups while invalidating Indigenous epistemologies. Toponyms – embedded in, and reflecting power relations – carry specific meanings; as an act of power, naming has important cultural implications. In Western Judeo-Christian frameworks, it is also a political act perceived as civilising: the conceptual premises of this perception assume that the newly-named places had no proper name before, being a sort of *terra nullius* (Mazzullo 2009; Nordin 2015) free for 'civilised' societies to conquer, rule and, ultimately 'civilise'. Thus in contexts of settler-colonialism, place-naming is marked by colonial, paternalistic attitudes which, in Norwegian Sápmi, are epitomised by Norwegian physical and ideological appropriation of Sámi lands from around the fourteenth century. Sápmi though, as all Indigenous lands, was neither empty nor untouched. For centuries Sápmi had been the cradle of Sámi cultures. The ancestors of today's Sámi have left profound traces in the landscape through material interaction with it and its inhabitants (visible and invisible, humans and other-than-humans) and through names and tales.

For decades Indigenous Sámi toponyms – and epistemologies – were excluded from the official public sphere although surviving in the oral memory of those who privately maintained Sámi customs, languages, and lifestyles. It was only through the strenuous work of political activists – often disapproved of by some of the community – that Sámi toponyms returned to public arenas. The recognition of Indigenous Sámi placenames through their use on official maps, road signs, and public documents is a significant expression of acknowledgement of Sámi identity and culture. The reclaiming of formerly "silenced" (Harley 2001) or "subjugated" toponyms and the conscious use of Indigenous placenames is an act of decolonisation considered a form of toponymic resistance (Helander 2009), recognising Sámi placenames' emancipatory role as decolonial tools.

In the area known as Márku (Norwegian: Márka),² the inland territories of Stuornjárga between Skánik/Skånlund-Dielddanuor-

² Originally derogative, this term has undergone a process of resemanticisation, becoming a positively-charged endonym. Márku derives from *markebygd* (outlying fields), a term Norwegian-speaking coastal villages used to refer to rural settlements located in the inner areas of the peninsula (Storm 1993).

ri/Tjelsund (Troms-Finnmark) and Evenássi/Evenes (Nordland), de-colonial processes have enjoyed privileged expression in toponymic resistance since the 1990s. Here, some 300 km north of the Arctic Circle, in October 2000, at a time of marked ethno-political tension about the presence/absence of placenames in the public/institutional spheres, a leaflet signed S.A.G. (Sámisk Aksjons Gruppe)³ and distributed to local households, read: “This is just a small reminder of the villages in Skánland’s actual placenames and identities” (Mathisen 2002, 81). In autumn 2001, a performative protest followed: Indigenous Sámi toponyms appeared overnight on handmade road signs in Skánik/Skánland, testifying to the important role Sámi toponyms play as sources of identity, being associated – and connecting people – with local stories, history/ies, and cultural values, while epitomising indigenous epistemologies long shunned by colonial authorities. Indigenous Sámi toponyms enshrine local understandings of relations between the environment and its inhabitants – humans and other-than-humans – offering an emic perspective of Indigenous conceptions of shared spaces regulated by relationships, reciprocity, and respect. Claiming their presence in the public sphere was an act of empowerment and a revindication of cultural affiliation.

The above makes Stuornjárga’s linguistic landscape particularly interesting to Environmental Humanities, allowing observation of how Indigenous Sámi worldviews⁴ and values are embedded in the landscape and evoked through placenames. Here, I have developed themes addressed in my PhD thesis on cultural efflorescence in Stuornjárga. This essay draws upon interviews with my interlocutors (local cultural workers and activists), bibliographical sources and analyses of written and visual materials collected during my 16-month-long fieldwork⁵ in Sápmi as a young, female Italian cultural anthropology PhD student.

³ S.A.G. stands for Sámi Action Group. This was an anonymous local Sámi activists’ group.

⁴ Konsta Kaikkonen, a Finnish researcher in Sámi religions, discusses the difficulties intrinsic in the identification of a culturally-sensitive terminology to account for Indigenous Sámi worldviews and practices coeval and intermingled with Christianity. Following Sámi scholar Rauna Kuokkanen, Kaikkonen proposes using Sámi terminology, rooted in Sámi indigenous worldviews. Sámi scholar Jelena Porsanger developed the expression *sámi eamioskkoldat* to describe Sámi indigenous religions, which expression emphasises “the continuity of Sámi lands and the Sámi people, the central meaning of elders and ancestors as bearers and teachers of Sámi traditions, and the inseparable reciprocity of people and the natural environment” (quoted in Kaikkonen 2021, 9). While acknowledging the importance of indigenous terminologies and their role in conveying culturally-specific values and notion, I shall here employ the expression ‘Indigenous Sámi worldviews’ when referring to Sámi worldviews and practices coeval/intermingled with Christianity.

⁵ During fieldwork, I employed qualitative methods: semi-structured in-depth interviews and participant observation at Sámi festivals.

2 Assimilation Through Enforced Conversion and Toponymic Colonisation

Until the mid-20th century, the Máru was characterised by substantial adhesion to Laestadianism (Gaski 2000), a branch of Lutheranism based on the teachings of the 19th-century pastor Lars Levi Laestadius, himself Sámi on his mother's side. Nevertheless, elements of Indigenous non-Christian cosmologies permeated local worldviews. Filtered through missionaries' Christian-centred accounts, knowledge of Sámi pre-Christian epistemologies is partial and inevitably biased. Missionaries-produced documentation aimed at understanding Sámi worldviews to eradicate them. Drawing their conclusions from available information, scholars agree that, albeit highly localised and differentiated, Sámi worldviews shared some important features. There was no individual creator, no codified authority or textual doctrine; instead, Sámi worldviews were fluid and adaptable to socio-cultural variations. Indigenous Sámi worldviews can be regarded as polytheistic and animistic: sacred authority was bestowed through dreams, individual revelations and states of altered consciousness (Rydving 1995), and humans share the world with other-than-human entities transcending the perception of most people with whom they enjoy relations of reciprocity and respect (Helander-Renvall 2010). As Helander-Renvall notes, relational epistemology as delineated by anthropologist Nurit Bird-David can also be used to describe Sámi indigenous worldviews according to which “humans are part of a dynamic cosmic network of mutual relations” (quoted in Boekraad 2016, 20), and such relations are grounded in interdependence and reciprocity. Sámi acknowledge the non-human personhood of spirits, animals and natural entities. Traditional Sámi ethical principles, defined by Helander-Renvall as the intrinsic equality of all creatures and their right to exist and live (2014), shape Sámi relations with nature, landscape, and the entities dwelling there (animals, spirits, beings, ancestors). Sámi share their space with other entities, interacting and negotiating with them (e.g. gaining permission to use a particular space for human activities) rather than imposing control. This shapes how land is experienced by the Sámi.

The profound Sámi understanding of nature is built upon experience-based knowledge of natural phenomena developed through centuries-old interaction with their sub/Arctic environment (considered harsh and inhospitable by colonial settlers) in which they thrived. The Sámi ritual specialist (*noaide*) was a culture-bearer with profound knowledge of Sámi cosmology and mastery of various skills and techniques (the cure of psycho-physical ailments, divination, the performing of collective rituals). *Noaide* held a central position in mediating between the visible and the invisible worlds, between perceptible and imperceptible dimensions. Rituals were performed in different

locations both in the open air and inside Sámi dwelling places such as the *goahti* (turf hut). *Sieidi* (sacrificial sites), usually prominent elements of the landscape, were not only central to Indigenous Sámi relations with the landscape and its invisible but perceptible dwellers, but they also constitute one of the few expressions of Sámi Indigenous worldviews that have left archaeological (i.e. tangible) traces.

Christianisation of the Sámi was a gradual process spreading from south to north and from east to west. A centuries-long pre-conversion phase, during which contact influenced Sámi worldviews (and vice-versa), was followed by a period of violently-enforced Christianisation. Formal missionary activity began in Sápmi in the 18th century. Although some people willingly embraced Christianity, historical evidence proves that children were sometimes taken from their communities to be educated in Christian environments so that, upon their return to their families, they could proselytise as cultural insiders (Lindmark 2013). Missionaries targeted Sámi worldviews and their visible concrete elements, working to locate holy sites to destroy them or force local Sámi to do so; ritual drums were seized, Sámi knowledge systems demonised, and witch trials led to the execution of Sámi ritual practitioners (Hagen 2014). Many Sámi refused to surrender their drums, often handed down from generation to generation, thereby connecting their owners with ancestors and descendants. Instead of yielding them to the authorities, some preferred to place their drums in local lakes or hide them in the woods. Upon favourable environmental conditions, such drums could be preserved to the extent that some of them were discovered in their original hiding places decades later, material proof of otherwise immaterial practices. The *goavddis* (drum) retrieved in Hilsá - Stuornjárga - is such a rare find.⁶ The covering membrane with its hanging objects had long since disintegrated. The pine-burl drum-frame most probably dates from between 1680-90 and 1730-70, when Nordic witch hunts had already ceased. Pre-witch-hunt drums, passed down from one generation to the next, were thought to be still in use in the 18th century; but the Hilsá drum was created after the persecution. It testifies that the knowledge and skills required not only to construct drums but also to use them were still alive and local Sámi were still engaged in non-Christian spiritual activities within a complex religious context (Storm, Fonneland 2022), bearing witness to the resilience and adaptability of Sámi cultures in Stuornjárga.

⁶ In the early 1990s, the drum-frame was found by chance by locals walking in the mountains. They did not immediately grasp the significance of the object they had stumbled across; it was only in 2016 that they presented the object to the attention of museumologists based in Tromsø (Storm, Fonneland 2022).

By shattering sieidi and burning drums, missionaries were not only preventing the Sámi from performing rituals; they also ravaged sacred places and objects at the core of Sámi Indigenous relations with their environment while physically imposing Christianity by building churches and chapels across Sápmi. Missionaries hoped to annihilate Sámi spiritual connection with the entities populating Sámi Indigenous cosmologies by cutting the ties that, for generations, had connected people with the land. Not all sieidi though were destroyed and some still stand even if their original meaning is now lost to most.⁷

Enforced Christianisation eroded pre-Christian worldviews and ritual practices, many of which were often lost to time, while some elements survived within Sámi Christian frameworks. Once the destruction of physical manifestations of the sacred was completed, colonial authorities shifted their attention towards the annihilation of immaterial repositories of knowledge and meaning: placenames. Emerging from Indigenous-specific epistemologies, Sámi toponyms reveal Indigenous Sámi engagement and interaction with their landscape.

Anthropological interest in toponyms is as old as the discipline itself. Given their cultural relevance, toponyms have been at the core of anthropological enquiry from the dawn of the discipline when anthropology was closely interwoven with colonial agendas. In the early 20th century, many anthropologists studied native placenames; among them Franz Boas examined Indigenous North American placenames, publishing *Geographical Names of the Kwakiutl Indians* in 1934. According to Thornton, in recent decades research into Indigenous toponyms has regained a prominent role in Anthropology, with Keith Basso (1996) at the forefront of the study of Indigenous placenames' cognitive and symbolic dimensions. In Thornton's view, the fascination exerted by placenames as a privileged topic of anthropological interest derives from their intrinsic characteristic of intersecting "the three fundamental domains of cultural analysis: language, thought, and the environment" (Thornton 1997, 209). Placenames are gateways to cultural-specific engagements with/understandings of the environment. More than indicators of spatial locations, toponyms connote history and local realities (Ingold 2000). The study of placenames thus uncovers the cultural "hidden landscapes" (Cogos et al. 2019) they enshrine. Given their cultural and political

⁷ In the Márrku, as many placenames testify, contact between humans and other-than-human entities was common. Also in this area colonial epistemological and physical violence against other-than-human entities was channelled against their physical manifestations. In 1722, missionary Jens Kildal destroyed forty sacrificial sites in Ofoten - where Stuornjárga is located - in less than a month (Hansen, Olsen 2014). Nevertheless, as Sámi scholar Marit Myrvoll demonstrates (2017), memories of sacred sites in the area lasted for centuries after the missionaries visited the area.

relevance, placenames have also been loci of confrontation as colonial elites transformed them into assimilation tools.

Through examination of colonial policies connected with place-names in Sápmi, Helander notices how the erasure of local place-names epitomises asymmetric power relations: by changing local names, imposing Norwegian toponyms, colonial authorities claimed cultural ownership of settlements, locations, and topographical formations. This was a slow process with long-lasting consequences. Formally initiated at the beginning of the 19th century, toponymic substitution through the imposition of Norwegian toponyms can be traced back to late 18th-century Norwegian authorities' pursuit of an ideal uniformity of both language and practices. The Sámi cultural-linguistic autonomy was perceived as a hindrance to an idealised homogenous Norwegian national identity. Sámi placenames came to epitomise the intrinsic alterity of the Sámi regions and their inhabitants, challenging homogenising, colonial claims advanced by southern ruling elites. Marit Myrvoll highlights that

the eradication of Sámi placenames from official maps was a part of policy of Norwegianization of Sámi landscapes. (2017, 107)

Similarly, Helander notes that

[n]aming a place anew is a widely documented act of political possession in settlement history. Equally, the taking away of a name is an act of dispossession. (2014)

Borrowing from Harley, Helander employs the expression “toponymic colonialism” to define Norwegian colonial re-naming practices aiming at disowning indigenous epistemological autonomy and Sámi ownership over the land (2014). Not only is such a re-naming practice a violent act of silencing, but it also contains implications hindering intergenerational transmission of the Sámi cultural heritage. By implementing ‘toponymic silencing’, government officials often prevented knowledge, values, and history from being passed on to future generations. Deprived of its indigenous name, a place was deprived of a connected set of histories, memories, and meanings while the knowledge embedded in its Sámi placenames risked being lost forever.

3 **Toponyms and Stuornjárga’s Collective Sámi Memory**

Applying the above considerations to Stuornjárga – where the Máru is located – one can see that this area is emblematic of the way which placenames and their cultural implications have survived in local collective memory despite colonial attempts to eradicate them.

Rural Sámi settlements in Stuornjárga can be traced back to the 1700s, when Sámi who used those areas as summer grazing lands settled in the Márku, where they already had strong connections through family ties with local nearby Sea-Sámi communities. Until the 1950s, the subsistence strategies of the Stuornjárga peninsula followed the differentiation in the exploitation of local resources. Such variant models of exploitation were charged with ethnic features. Along the coast, communities – usually self-identifying as Norwegians – engaged primarily in fishing while, inland, small-scale farming constituted the bulk of local Márka-Sámi economics. During winter, Márka-Sámi men did paid work or went fishing in Lofoten and/or along Finnmark's coast (Storm 1993; Hansen, Olsen 2014). Since the 1960s, Stuornjárga has witnessed migration flows from the countryside towards major cities both near and far. For many, the Márku is no longer the site of permanent residence but is connected with their roots, defining their identity. Since the 1980s, local cultural workers, private individuals, and institutions have embarked upon extensive collection of Sámi placenames. Their researches were based on interviews with local culture-bearers and on material retrieved from local archives, resulting in important publications documenting local Sámi toponymy while ensuring its preservation.

The general considerations about Sámi toponyms reported above held true also in the Márka, where Sámi toponyms often offer indications of local topography, flora, and fauna. Although reindeer-herding and -hunting are no longer widely practised in the area, toponyms connected with reindeer (*boažu*) still exist in the Márku: for instance Boažogárdzik (the reindeer fence) and Bohčojeaggi (the reindeer mire, where a wolf is said to have eaten one of the last wild reindeer) (Skåden, Skåden 2013). Other animals such as the bear (*bienna*) are remembered in places such as Biennaráiggit. As Cogos et al. (2019) show, Sámi placenames may allude to events affecting the landscape, for instance forest fires and their consequences. Buollámdievá/Brenthaugen can be traced back to such origins, *buollán* meaning ‘burnt’, bearing witness to a past forest fire (Skåden, Skåden 2013). Placenames may also evoke tasks, functioning as historical sources for past generations’ daily life; Galmmadasrudni, ‘the cooling well’, used to refrigerate milk in summer. The toponym Dák-tebákti (*dákti* ‘bone’ + *bákti* ‘rock’) has a similar documentary value, offering insights into the ancient Márka-Sámi spiritual landscape. According to Márka-Sámi authors and cultural workers Asbjørg and Sigmund Skåden (2013), in the past this was a sacrificial site.

The revelatory character of Sámi toponyms and the importance of stories connected with them emerged during an interview with Sigmund Skåden. He believes stories are deeply rooted in the territory, providing reference points for historical events and explanations of specific local landscape features:

SIGBJØRN Placenames are descriptive of the landscape, it's very common. But there are also some stories about "this is why" or "why that?" We have a small waterfall in the river, not so far from where I grew up, called the Six-Finger-Waterfall because one of the women who fell into it came from the Six-Finger Family, a family which had a tendency of getting children with six fingers so it was called the Six-Fingers-River. For instance, that's one story. (Sigbjørn Skåden, interview, 21 February 2019, Tromsø)⁸

As S. Skåden's account illustrates, placenames and tales are often interdependent - the tale explaining the placename and the placename evoking the tale - making the landscape a repository of meanings, charged through the etiological stories they evoke. As unusual episodes or peculiar physical characteristics of an individual may be the origin of a placename, so community members who left a mark in local memory are remembered through placenames, engaging people with their ancestors. While discussing Dundor Heikka - a famous 19th-century Márka-Sámi bear hunter - I asked Sigbjørn Skåden whether there were any traces of Dundor Heikka in local memory. Sigbjørn replied that some placenames are associated with him: local oral tradition reports boulders connected with Dondor Heikka and the bear hunt, and the river Dundorajohka bears Heikka's family name. This river flows from Husmaroggi/Husjorda, where Dundor Heikka's grandfather, Ole Nilsen Dundor settled as early as 1770 with over 1,000 reindeer (Skåden, Skåden 2013).

Sámi toponyms often encapsulate/provide information about a given location and its natural features. This is the case of an ancient farm now seat of a Márka-Sámi open-air museum: Gállogieddi, 'the meadow by the great stone'. *Gállu* alludes to the big rock dominating the area, whereas *gieddi* is North-Sámi for 'meadow'. This name reflects what Ligi (2016) defines the historical-emotional depth places can hold. An alternative toponym once used for Gállogieddi, still part of local oral knowledge, is Gállogoahti: the *goahti* (turf hut) by the boulder. Although the first element of the toponym is still *gállu*, the placename is modelled upon *goahti*, a semi-permanent Sámi dwelling-place which once stood where the farm was later built (Myrnes et al. 2006). Both Gállogieddi and Gállogoahti demonstrate that this boulder was a prominent element of the landscape: local stories relate that beneath it lives an *Ulda* (pl. *Ulldat*), a chthonic being who has often interacted with members of the local family, warning them of

⁸ The transcriptions reported in this contribution are not verbatim, as I omitted repetitions. As agreed during the interviews, held in English, I reported my interlocutor's real name.

dangers or sharing with them farm buildings such as the barn. These are only few of the numerous attestations of contact and collaboration between humans and the *Ulddat* dwelling in the area. Such stories connect the local landscape and its historical (farm) and topographical (boulder) elements with Sámi indigenous worldviews.

Often called “the little people” or “the (little) people from the underground” (fieldnotes, Skánik, 25 August 18), the *ulddat* – also known as *gufihtar*, and *háldi* – belong to the vast Indigenous non-Christian Sámi folklore. They populate the same places as the Sámi and, although humans-*ulddat* interaction is common, humans can hear but rarely see these subterranean/invisible beings and then only when the latter permit it. According to Turi (2010), *ulddat* dress similarly to, and own reindeer like, the Sámi. These guardian spirits, who can be dangerous or kind, demand respect to ensure their benevolence. *Uldatt* are considered civilising beings, having taught their essential skills to the Sámi. Turi explained that Sámi learned *Noaidevuhta* (the crafts of the *noaidi*) and to *joik* (chant) from the *ulddat*, tracing these practices to other-than-human origins (Cocq 2008). Such an approach towards the *ulddat* confirms the principle of reciprocity identified by many scholars as a cornerstone of Indigenous Sámi cultural values. Furthermore, albeit other-than-humans, the *ulddat* are not perceived as essentially different from the Sámi: in appearance they are similar to, but more handsome than the Sámi. *Ulddat* girls are beautiful, seductive, and irresistible, posing a threat to young Sámi men who fall in love with them as tales of intermarriage show. *Ulddat* have been integrated into Christian frameworks as Qvigstad's 1928 collection shows. Ellen Utsi relates:

Adam and Eve had many children, and then God came to visit them, and Eve hurries washing the children, but did not get all finished. She hides the children she had not washed, and God punishes her by declaring that the children who are hidden will remain invisible. (Coqc 2008, 124)

Per Bær, as he told Qvigstad, heard a similar story from a man who said he had read it in the Bible: Adam and Eve were ashamed about having so many children and hid some of them. God commanded that the hidden ones should remain so. Both stories explain within a Christian framework the genesis of *ulddat*, tracing them to the very origins of humans, among them the Sámi to whom they are ultimately related since they are all descendants of Eve and Adam. Boulders/*gál-lu* are often associated with *ulddat*, as is apparent in Stuorgállu (the big rock). Skåden and Skåden report that local stories tell of *ulddat* living under the eponymous boulder, near which they have been seen (2013). Besides toponyms indirectly connected with *ulddat*, some placenames in the Márku openly indicate their presence: Ulddaráigi (the

hole of the *ulda*), Ulddabákti (the rock of the *ulda*), where blue goats have been seen grazing, blue signalling the *ulddat*'s ownership of the animals (Skåden, Skåden 2013).

While discussing placenames connected with the 19th-century bear hunter Dundor Heikka, Sigbjørn Skåden mentioned that:

- s Just close to that river, there is a story of something called... ah, what's the English...? Well, it's like: the "revisiting children's meadow".
- E Revisiting?
- s Yes... unwanted children put out to die... because they're not... [they're] those born out of wedlock. In Sámi mythology they will be around. In Sámi tradition they may return because they are not baptised. They return and they cry so... in some places you would hear children crying. One of the fields close to that waterfall is called Eahpádusjalga, which means 'the field of unwanted or... returning children'. It's just an example. I mean, most examples aren't that interesting, but it still gives you a connection. It connects you quite directly to the history of the whole old district.
- E These places got these names because there they [the local people] used to hear the children crying or because it was where they used to put out children?
- s That's a place where you can hear [them].

(Sigbjørn Skåden, interview, 21 February 2019, Tromsø)

Sigbjørn Skåden refers here to the *eahpádus* (pl. *eahpádusak*, standard Northern Sámi *eahpáraš*), a restless ghost of an unbaptised, murdered or abandoned child left to die in the woods, without receiving a proper burial. These liminal spirits haunted the place where they died, appearing regularly – usually every 7 years – at dawn or dusk. To bring them peace, one should give them a name upon hearing their cry because baptism will free their souls (Qvigstad, 1928; Pentikainen 1968; Skåden, Skåden 2013). The memory of encounters and interactions with *eahpáradusak* is passed down in placenames. Besides Eahpádusjalga, an *eahpádus* was heard in the Márku in Eahpádrusrápma. A man who encountered an *eahpádus* there told Skåden and Skåden (2013) about hearing an *eahpádus* which his own father then baptised. To name an *eahpádus* is a form of interaction built not on fear alone, although encountering an *eahpádus* was frightening and naming was also an apotropaic action. Naming means observing the principles of respect and reciprocity which inspire Sámi values and underpin Sámi relations with other-than-human entities. As Sigbjørn Skåden explains:

- s They will come and you will have to be aware because they are dangerous to you if you don't treat them [properly].
(Sigbjørn Skåden, interview, 21 February 2019, Tromsø)

Behavioural rules have to be followed when dealing with the ghosts of murdered children to ensure that they will not hurt the living. Not only *ulldat* and *eahpádusak*, embedded in placenames, populate the Máru landscape: *Stállu* (Sámi folktales' ogre-like beings), for instance, also appear in numerous toponyms: *Stálogorsa* (the deep river-valley of the *stállu*); *Stáloráigi* (the *stállu* hole) was said to be the entrance to a *Stállu*'s home. The hole gradually disappeared but children were warned not to approach it as the *stállu* might take them. In A. and S. Skåden's opinion, the story originated in the desire to keep children away from dangerous places (2013).

In addition to spiritual beings relevant for the Máru-Sámi, animals significant for the locals also populate Máru-Sámi toponyms. One significant such animal is the frog (*Čuoppu*) whose epithet is associated with numerous places: *Čuoppoláddu* (the frog pond) where these amphibians gather in early spring; *Čuoppojeaggi* (*jeaggi*, 'bog'); *Čuopponjunnji* (*njunni*, 'nose, protruding feature'); *Čuoppeorápma* (*rápma*, 'forest slope'); *Čuoppodievvá* (*dievvá*, 'hill, round mound'), *Čuoppojávri* (*jávri*, 'water, lake'), where frogs have been seen clasping their hands together. One toponym indicates the presence of *Čuoppomáddu*, the great Mother of Frogs: *Čuoppomáddojorbmi*, a deep hollow in either a river or a bog. According to Asbjørg and Sigbjørn Skåden numerous stories about the Mother of Frogs are associated with *Čuoppomáddojorbmi* (2013) as I discuss in the section below.

4 Čuoppomáddu

Among the many beings dwelling in the Máru, *Čuoppomáddu* holds a special place in local memory; she is one of the numerous *Máddut* or 'Mothers', guardian spirits presiding over their species, protecting their offspring and environments. Offending a *Máddu* or harming her descendants brings consequences. According to late Máru-Sámi author and cultural activist Asbjørg Skåden,⁹ *Čuoppomáddu* likes

⁹ In 1994, Asbjørg Skåden published *Čuoppomáddu*, a short volume in the Duotunus/Torne dialect of North-Sámi - spoken in the Máru- for Skániid Girjie, the publishing house A. Skåden founded and whose logo is a frog, in honour of *Čuoppomáddu*. The stories - which can be traced back to Skánik, Evenašši, and Áravuopmi in Áhkkonjárga - were collected through interviews carried out since 1987, when the editor was working as a co-educator in the community. As Asbjørg Skåden explains, the collection was enriched by memories from her own childhood. Local students were also involved in the project: they were to ask parents, grandparents and other members of their ex-

to live in peaceful seclusion in deep puddles, streams, creeks, river-beds, bogs, marshes, and bottomless lakes. She resembles a large frog, appearing to humans only when disturbed or her offspring are threatened: then she jumps on the persecutor, killing, maiming or frightening her/him off. If she and her offspring are left in peace, she minds her own business.

Qvigstad collected numerous tales, still told today, traceable to *máddu* stories. A *máddu* may be known in some areas and unknown in others, and the presence of a Mother of a species in local folklore reveals a lot about the community acknowledging her. The species over which she presides was highly regarded, or was once prominent in the local environment. Examining the role of animals with a *máddu* in Sámi pre-industrial cultures, Boekraade notices that both animals constituting food sources - fish, birds, but not reindeer (or their predators) - and animals with no immediate material function and/or fragile populations - mosquitoes, frogs - historically had a *máddu*. Boekraade suggests that *máddu* may pertain to those small animals important in terms of diet, relevant to Sámi medical practices,¹⁰ or with important symbolic roles for species-local environment equilibrium (Boekraade 2016). Both Boekraad's (2016) and Magga et al. (2001) consider Sámi indigenous values and practices as factors fostering intra/inter-species equilibrium. Boekraad examines these factors by analysing myths and rituals, preserved and transformed across generations, concerning animals. Closeness between humans and animal species - through the daily interaction humans have with individual animals - along with mutual respect and reciprocity are at the basis of Sámi understanding of relations. In Boekraad's view, frogs help to keep water sources clear of plants and insects, a fact well-known to the Sámi given their intimate, experience-based knowledge of their natural environment (2016).

Considering that Čuoppomáddu was said to live in streams, rivers, ponds, bogs, and marshes, which often bore her name - see Čuoppomáddojorbmi - A. Skåden reports that those were dangerous places children should avoid. She explains that she used to wander

tended families what they knew about Čuoppomáddu. In a snowflake effect, numerous stories were collected and later converged in the book (2008, 7). The stories collected in the volume tell of the interaction (encounters but also accidents) between humans and Čuoppomáddu, in which the latter often played an active role. One story tells of when, in Áravuopmi/Vassdalen, Čuoppomáddu came ashore, took a cow, dragging it into the water. In the 2008 Norwegian translation - *Froskemora, Čuoppomáddu* - Asbjørg Skåden explains that Čuoppomáddu was usually translated into Norwegian as Storfrosken (Great Frog) or Froskemora (Mother Frog, The Mother of Frogs) but that she chose to employ the original North-Sámi term also in the Norwegian edition of the book. As it emerged during fieldwork, even when Čuoppomáddu stories were told in Norwegian, the name of the Mother of Frogs was not translated into the hegemonic language.

¹⁰ Among the Sámi, frogs were used to cure specific ailments (DuBois, Lang 2013).

freely in the Márku with her siblings and local children, walking confidently through local forests and fields, but does not remember being warned to avoid dangerous rivers, bogs, lakes or ponds. However, she does recall avoiding those places out of respect rather than fear, observing the spatial division between humans and other-than-humans because she understood where Čuoppomáddu dwelt. As a child, she had waded and splashed in the Storjohka/Storelva creek but never in the buck-leaf-covered pool below that bathing place, i.e. Čuoppomáddu territory, with whom she respectfully shared the river. Asbjørg Skåden explains that, in her own childhood, Čuoppomáddu was like a guide helping children to move confidently in nature (2008).

Boekraade draws attention to how children's play and practical activities interact with the environment, dynamically perpetuating ethno-ecological beliefs and knowledge (2016). A connection between Čuoppomáddu and children's upbringing was echoed in an interview with Sigbjørn, Asbjørg's eldest son, then in his early 1940s:

SIGBJØRN I guess the most prominent story of that kind in my childhood was about the Big Frog. It's just a common story that every child in the Márku was told. Even those who weren't supposed to be Sámi. They too were told about this creature with a Sámi name, Čuoppomáddu, the Mother of Frogs, as she's called in the Márka. We pronounce it like this, in our local dialect. In the Finnmark North-Sámi, [she] is called slightly differently.

- E Did your mother tell you these stories in North-Sámi or in Norwegian?
- s Well I normally heard them in Norwegian. But the name was always in Sámi in every family. Everybody knew Čuoppomáddu stories, even though they weren't supposed to be Sámi. Now I don't know if people tell Máddu stories anyway, any more...
- E Are you telling these stories to your child?
- s Of course I am! These stories... you start telling these stories, parents start when you're old enough to be walking on your own and stuff like that. So they say Čuoppomáddu "lives in that... up here" and you start telling Čuoppomáddu stories because you do not want your child to go down to the river or the lake on its own of course, or down to the water where they can drown. Čuoppomáddu is like a big frog, between half a meter and a meter. She is huge. She chases people. If she gets to take you it can just strangle you because she's got strong arms. She goes for your neck. And she also has poison. She can spit. So we used to be quite afraid of her.

(Sigbjørn Skåden, interview, 11 May 2020, Tromsø)

On another occasion, Sigbjørn Skåden told me: "I grew up being afraid of that great frog" (Private conversation). As emerges from

this extract, Asbjørg Skåden told his son Čuoppomáddu stories. Their intrinsic value was the enshrinement of the nature of human/other-than-human relations in Indigenous Sámi epistemologies. Furthermore, as A. Skåden highlights in her 2008 *Čuoppomáddu-Froskemora*, since such stories originated in the past, they constitute historical sources for the Márka-Sámi past and its values. She explains that modifications in the socio-economic context led to changes in the way people deal with their environment. No longer useful or necessary, old practices have been abandoned¹¹ and today people seldom travel to the places where Čuoppomáddu can be met because they no longer fish along the creeks presided over by the Mother of Frogs (2008). By evoking and transmitting Čuoppomáddu stories, orally or in writing, Sámi values reach younger generations, preserving knowledge about local culturally-specific practices. This knowledge falls within what Ingold and Kurttila define “traditional knowledge as generated in the practices of locality” (2000, 184), accurate knowledge rooted in the act of dwelling in an area and today understood as traditional by members of the local community.

During the interview with Sigbjørn Skåden, the conversation focused on the intergenerational transmission of folktales. When I asked him if he was telling Čuoppomáddu stories to his own child who, at the time was about 2 years old, he answered: “Of course I am!”. Not only did he tell Čuoppomáddu stories to his toddler son but also, given the fact that they live in Tromsø, he had adapted them to make them credible and instructive in an urban context: since there are no swamps or marshes in Tromsø, he said he could adopt the sewer system as his reference. He believes that Čuoppomáddu stories had a pervasive educational purpose and were designed to demotivate children from either upsetting animals – thus breaking the human-environment equilibrium – or preventing them from endangering themselves by playing close to water. By collocating Čuoppomáddu stories in the sewers rather than in the swamps, Sigbjørn hopes to prevent his child from playing near dangerous waters; simultaneously, he is transmitting to his son cultural knowledge embedded in stories about the Mother of Frogs to foster in him a sense of belonging to the Márku, from which both these stories and his family come. This is an important process of resemantisation where stories deeply entangled with the local landscape, guaranteeing equilibrium among different social actors (humans and other-than-humans), are now told not just for their original purposes, but also to keep alive

¹¹ This is the case of Sennegras (*Carex vesicaria*), a sedge growing in circumpolar regions once used by Sámi for insulating footwear. This grass – to be cut and harvested at a specific time of the year and dried before being used – is no longer used for insulating the *nuvttot/gállohat* (Sámi winter boots) or the *gápmagat* (Sámi summer shoes).

ties among members of a community, who now mostly live far from where these stories first arose. Through this form of adaptation, by absorbing change (epitomised by urban rather than village – previously semi-nomadic – life) as well as by connecting new generations with the Márku, these stories transform and yet maintain their core features while reinforcing the bond between younger generations and the cultural landscape of their ancestors.

5 Conclusion

Indigenous toponyms enshrine Sámi history, histories, and indigenous cosmologies, witnessing human/other-than-human encounters by evoking stories concerning their eponymous entities. They also function as conveyors of behavioural rules in specific places and relations with beings dwelling there, bearing witness to culture-specific relations with other-than-human entities.

The information enshrined in Sámi toponyms is multifaceted and may refer to local environments, topographic elements, specific events and/or activities connected with a given place, or it may encompass the sacrosanct dimension of locations such as sacred mountains (Myrvoll 2017). Sámi Indigenous toponyms emerge as expressions of "situated knowledge" interrelated with time, space, and culturally-situated practices (Pettersen 2011). As Cogos et al. demonstrate, Sámi placenames organise an "oral way of mapping, built around narratives and the designation of specific landmarks" and are "forged into specific ontologies and express Indigenous ways of interacting with the landscape" (2017, 43). Although for many Sámi the relationship with nature today has shifted from subsistence to leisure (Helander-Renvall 2014), traces of Sámi non-Cristian practices are still present in local oral traditions, enshrined in placenames and expressed through practices and relations with natural elements.

As my discussion has shown, in Stuornjárga toponyms function as repositories of meaning, encapsulating elements of local Sámi cosmologies, testifying to non-Christian Sámi worldviews while documenting the relationship between the Márka-Sámi and their landscape. Such a relationship developed through centuries-long contact between their ancestors and their territory, a contact deeply rooted in local history and in Sámi non-Christian worldviews. Despite colonial attempts to eradicate them, Sámi toponyms have been brought back to the public sphere and with them all the histories, beliefs, cultural practices they epitomise and the stories they evoke. For this reason, the Márku cultural landscape is layered with meanings, history/histories, and stories. Ancestors and other-than-human beings populate the landscape, their existence being transmitted across the generations through oral stories and evocative placenames.

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Ante-Litteram One Health in India Three Examples of Community-Based Debate and Action on Multispecies Wellbeing

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Abstract Historical research on One Health is offering interesting information about the development of this concept within human and animal health institutions and professions. In contrast, little is known about whether and how local communities have discussed – in their own terms – and managed One Health issues. This paper presents three examples of community-led debate and action on One Health in India: the eco-religion of Bishnois, the collapse of the vulture population, and plastic pollution in cows' bodies. More research from the social sciences and the humanities is necessary to understand and learn from the dynamics of multispecies entanglements at the local level.

Keywords One Health. India. Bishnois. Vulture crisis. Plastic pollution. Community values.

Summary 1 Introduction. – 2 Bishnoism. – 3 Skies Without Vultures. – 4 Plastic-Fed Cows. – 5 Conclusions.



Peer review

Submitted 2022-03-20
Accepted 2022-05-20
Published 2022-06-22

Open access

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Citation Nadal, D. (2022). "Ante-Litteram One Health in India. Three Examples of Community-Based Debate and Action on Multispecies Wellbeing". *Lagoonscapes*, 2(1), [1-18] 37-54.

DOI [10.30687/LGSP/2785-2709/2022/01/002](https://doi.org/10.30687/LGSP/2785-2709/2022/01/002)

1 Introduction

The fact that human, animal, and environmental lives are entwined is pretty self-evident. Yet, over space and time, human societies have not always been inclined to acknowledge this and to live in accordance with this vision of multispecies existence. Those who have done so, are likely to have described and verbalised the interdependence of human, animal, and environmental health in very different, context-specific ways. In the West, 'One Health' is, alongside the less-used 'EcoHealth', and 'Planetary Health', the phrase currently used to describe the:

integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals and ecosystems. It recognizes the health of humans, domestic and wild animals, plants, and the wider environment (including ecosystems) are closely linked and inter-dependent. The approach mobilizes multiple sectors, disciplines and communities at varying levels of society to work together to foster well-being and tackle threats to health and ecosystems, while addressing the collective need for clean water, energy and air, safe and nutritious food, taking action on climate change, and contributing to sustainable development. (OHHLEP 2022)

In ancient history, healers were often priests who, having gained anatomical and pathological skills from slaughtering animals and deciding on their purity for sacrifice, cared for both humans and animals. Then, during the Chinese Zhou Dynasty (11-13th century), veterinary medicine appeared as a discipline distinct from human medicine and it remained so for several centuries. The two disciplines reconciled in the nineteenth century. First, with the advent of cellular pathology, scientists like Rudolf Virchow developed a strong interest in comparative medicine. Then, in 1976, Calvin Schwabe, a veterinary epidemiologist and pioneer of veterinary public health, consolidated the idea of 'One Medicine'. Importantly, his thinking grew out of working with the Dinka, a traditional pastoral society native to South Sudan (Zinsstag et al. 2011, 148). Finally, on the 29th of September 2004, 'One Health' was used formally for the first time during a symposium at the Rockefeller University in New York, titled *Building Interdisciplinary Bridges to Health in a Globalized World*, where the Wildlife Conservation Society brought together human and animal health experts. This meeting resulted in a set of 12 priorities to combat health threats to human and animal health through an international, interdisciplinary approach. Known as the 'Manhattan Principles', these priorities formed the basis of the 'One Health, One World' concept (Evans, Leighton 2014, 417).

Since 2004, the One Health agenda grew and developed and academic research on it - both on the practical implications and outcomes

of One Health implementation as an institutional response to growing health concerns at the human-animal-environmental interface, and from an epistemological perspective – expanded accordingly. This is not the place where to travel through this vast and ever-expanding corpus of knowledge, but two points are worth-stressing here.

First, an important limitation was identified in the One Health, One World idea. As the geographer Hinchliffe explains,

Although these efforts to work across disciplinary boundaries [the domains of veterinary, human, and environmental health] are welcome, there are also risks in seeking unity, not least the tendency of one health visions to reduce diversity and to under-value the local, contingent and practical engagements that make health possible. (Hinchliffe 2015, 28)

The danger is what sociologist Law calls a “One World metaphysics”: in the case of One Health, this would result from an excessive focus on the transmission of pathogens rather than on the socio-economic configuration of health and response to disease at the local level. More attention should then be given to *local worlds*, and not just ‘One Health’, where

health is dependent upon a patchwork of practices, and is configured in practice by skilled people, animals, micro-organisms and their social relations, (Hinchliffe 2015, 28)

and health management depends on different pieces of knowledge working together. Unfortunately, research on indigenous knowledge and the One Health idea remains limited (Hillier 2021; Riley 2021).

Second, community engagement is widely acknowledged as crucial to understanding and doing One Health efficiently and sustainably (Mitchell 2021). This is so because One Health is – or should be – a unifying approach by definition. A bottom-up approach is considered important to counterbalance the widespread tendency, at least in public health, to ignore the high risk of failure involved in top-down and one-size-fits-all strategies that do not take into account local needs, experiences, concerns, and priorities – or local worlds. Institutional and academic work on One Health, especially in Africa, is starting to increasingly pay attention to community-based surveillance (Dickmann 2018) or participatory research and policy design (Henley, Igihozo, Wotton 2021) as practical ways to go beyond the vague principle of community engagement and to focus, instead, on community empowerment.

This paper briefly presents three examples of One Health entanglements in India: the worldview of the Bishnoi community of the Thar desert, known for their willingness to sacrifice their lives to

save the trees and animals that share their delicate ecosystem; the almost-extinction of three species of vultures and the devastating impact on two multispecies communities that are now struggling to be healthy without these archetypical scavengers; and the ubiquity of plastic on the streets, in the rumen of cows, and eventually in the bodies of those who consume their dairy products. These three issues have three things in common: they have existed before One Health was formalised both as a theoretical concept and a practical agenda; they have been experienced, understood, discussed, and managed by the community itself much earlier than local, national, or international institutions; they give environmental health the importance that formal, institutional and academic work on One Health often overlooks (Esseck 2018). The materials this paper grounds on include three locally-produced documentaries (*Willing to Sacrifice*, *The Vanishing Vultures*, *The Plastic Cow*),¹ local and national webpages (such as community blogs, Facebook pages, etc.), and – to a lesser extent – the notes, pictures, and grey literature that I collected during my various trips to India for my fieldwork on free-roaming animals in the cities of Delhi and Jaipur (Nadal 2020), and on dog-mediated rabies in rural Gujarat and Maharashtra (Nadal et al. 2022).

2 Bishnoism

In Jodhpur, every tourist agency proposes a cultural tour to Bishnoi villages, variously described as “an eco-friendly sect of Hindu religion”, “nature worshippers”, “warriors of Mother Nature”, or “India’s first environmentalists”. Located in the Thar desert, the biggest desert in India, these tours usually favour the easiest-to-reach Bishnoi villages. They often leave out three villages that, for the Bishnois themselves – around 1 million people, concentrated in rural Western Rajasthan but also found in rural and urban Punjab, Haryana, and Madhya Pradesh –, are particularly significant: Pipasar, Khejari, and Vodha.

Pipasar is the native place of Guru Jambheshwar, also known as Guru Jambhaji, the founder of the Bishnoi Sampradaya. Born in 1451 and a cow herder until the age of 34, he spent the last 51 years of his life travelling and producing 120 *shabad*, poetic verses that he used to spread his message among the newly created Bishnoi community (Jain 2011, 51). The sect was founded in 1485, in Sambarthal, near Bikaner. The term ‘Bishnoi’ is composed of *bish* (twenty) and *noi*

¹ <https://www.idfa.nl/en/film/87dcc044-b1f0-48fb-9fe2-29c6d0035e6c/willing-to-sacrifice/docs-for-sale>; <https://www.worldcat.org/title/vanishing-vultures/oclc/457489009>; <https://karunasociety.org/the-plastic-cow-project>.

(nine). In 1485, Guru Jambheshwar created twenty-nine key principles for those who want to identify themselves as Bishnois. These tenets exist as lessons learnt during the severe drought and subsequent famine that had been hitting the area for years (Lal 2005, 194). He saw his co-villagers first cutting shrubs and trees to feed their animals, and then being resource- and hope-less as the drought continued and claimed animal and human lives. What, in modern terms, we would describe as sustainable management of plants (especially *khejri* trees, *Prosopis cineraria*, the State tree of Rajasthan) and water became key to his philosophy, which grounds on the protection and improvement of health and well-being in an all-encompassing way. Of his 29 principles, ten regard personal hygiene and environmental sanitation; eight are about animal and plant health and the preservation of biodiversity; seven prescribe healthy social behaviour; and four concern the worship of God (Jain 2011, 59). The second group of rules includes recommendations such as being compassionate towards all living beings; taking wood only from dead trees and branches (but preferring cow dung to wood for cooking purposes; additionally, Bishnois do not use wood for cremation, because they bury their dead); removing living beings from firewood; not killing animals (hence practicing vegetarianism) and not selling them to slaughterhouses; providing shelter to abandoned farm animals to allow them to reach a natural death (instead of being slaughtered); and not castrating bulls (because of the pain inflicted on the animal). Besides the 29 principles, Guru Jambheshwar's *shabad* often talk about the equality of souls among humans and non-humans (Reichert 2015, 11).

Khejarli is where the protective attitude of Bishnois towards trees entered local history on the 9th of September 1730 (Chapple 2011, 340). In that period, the Maharaja of Jodhpur, Abhay Singh, needed wood for the construction of a new palace and sent soldiers to cut *khejri* trees in the village, whose name at the time was Jalnadi. The villager Amrita Devi non-violently opposed this by hugging a tree and claiming that, even if one were to get their head severed to save a tree, still it is a cheap bargain (several versions exist of this now popular Bishnoi saying). Unimpressed by her values, the Maharaja's men decapitated Amrita Devi and her daughters, who had followed her example. As the news of the menace to *khejri* trees spread, people from 83 nearby Bishnoi villages met at Jalnadi and decided to collectively replicate Amrita Devi's form of resistance. In total, 363 Bishnoi men, women, and children were killed. Touched by their devotion to the cause, the Maharaja personally visited the village to apologise and ordered a decree forever protecting Bishnoi land from hunting and logging. This exemption exists still today, in and around the village whose name has been changed to Khejarli, after the trees' name. Some 250 years later, the Khejarli massacre inspired the world-famous Chipko Andolan (literally, hugging movement) of Uttarakhand,

considered the first non-violent social and ecological movement by rural communities, particularly women, for the conservation of India's forests (Jain 2011, 52). In 1988, the Government of India named the Khejarli village as the first National Environmental Memorial. In 2013, the Ministry of Environment and Forest inaugurated the Amrita Devi Bishnoi National Award for individuals or institutions involved in the protection and conservation of wildlife. The first award was given posthumously to Ganga Ram Bishnoi, a youth from Chirai village killed by the poachers he was pursuing in 2002 (Indian Environmental Portal 2003).

Vodha is the village where, according to their Facebook page, the non-governmental organization Bishnoi Tiger Force (BTF) is based.² BTF was formally registered in 2007 but it started as a collective initiative in 1999, after an event that had Bishnois on all national newspapers. In 1998, the villager Poonamchand Bishnoi took the Bollywood superstar Salman Khan to the court for allegedly killing two blackbucks (*Antilope cervicapra*, an almost-extinct species whose hunt is illegal throughout India) in Kankani village when he was in Bishnoi territory for the shooting of a movie. The whole community fought for this case for 20 years, until, in 2018, the actor was sentenced by a local court to 5-year imprisonment (*The Economic Times* 2018). BTF was then created as a social movement dedicated to taking and following up protest politics over wildlife protection and sustainable ecology (Sinha 2018). The NGO's logo has an antelope, the number '29' among its antlers, the words 'save animal' on its sides, and the name 'Bishnoi' under it. Local Bishnois participate in this initiative in various forms, by organising protests for the survival of Thar (e.g. when the government orders the construction of infrastructure in critically important bio-diverse areas without adequate, public discussion about the environmental impact of this, such as in the case of the Gorakhpur Nuclear Power Plan in Haryana – Manav 2012), supporting law enforcement in the local forest department (e.g. by informing them about poachers), and studying law to be eventually able to seek justice themselves in cases of local environmental crimes (Rahman 2020).

In general, Bishnoi villages are usually portrayed by local and government Rajasthani tour operators, national media, national and international websites for environmental activism, and scholarly reports too (Chapple 2011; Jain 2011; Reichert 2015), as the "oasis in the Thar", especially for animals. There, wild birds feed on the 10%-share of harvest that Bishnoi farmers put aside every year for them, and antelopes and deer regularly graze in a designated portion of their farmlands, because Bishnois believe that all living be-

² <https://www.facebook.com/rajeshgeelabishnoi/>.

ings have a “right to survive and share all resources” (Bishnoi 2010, 32). Some settlements are well-known for their community-run and temple-based shelters for orphaned and injured wildlife and abandoned farm animals. Pictures of Bishnoi women who breast-feed baby gazelles circulate on the Internet (Humairah 2017). Finally, in the small Khejarli hospital, the Bishnoi doctor who runs it provides medical care to both humans and animals (Reichert 2015, 61). Moreover, like other communities in the Thar desert, Bishnois plant trees and shrubs not only in open lands but also in the fields, as a barrier to soil erosion; they maintain efficient water harvesting systems to irrigate fields and allow the self-sufficiency of the community; and, at the centre of their villages, they have an *oran* (i.e. a large piece of biodiversity-rich land, kept in its natural form, to provide an alternate livelihood to locals in the form of seasonal desert fruits and fodder for livestock and wildlife) and a *johd paytan* (i.e., an artificial water body catchment).

To sum up, this community is considered the living example of how “by virtue of its simple approach to life” (Humairah 2017), “the natural co-existence among all the species” (United Religions Initiative 2017) can be acknowledged, valued, and protected. Bishnois’ frugal approach to life is based on ideals that are ultimately dictated by the context-driven practical necessity to live, in a harsh environment like the desert one, in harmony with “trees, animals and human beings – a perfect ecosystem” (Humairah 2017). The fact that Bishnois had been preserving wildlife well before the Wildlife Protection Act came into existence in 1972 is considered a proof

that the need to save nature does not arise from laws, but from an inherent understanding of knowing that we exist because of nature, and it’s not the other way around. (Patil 2020)

3 Skies Without Vultures

During the screening of *The Vanishing Vultures*, among the dozens of scenes of animal pain and death I was sadly getting used to, an image struck me above all the others. It portrayed an amount of life – of vulture life – I had never seen before, through a screen or in person. A picture taken at the Timarpur landfill in Delhi in the 1970s captured, in a single shot, thousands of vultures, patiently waiting for a meal, sitting wing-to-wing. At that time, India had probably 40 million Oriental white-backed vultures (*Gyps bengalensis*). Thirty years later their population had crashed, falling by more than 99.9%. A similar demographic collapse occurred in two other species of vulture endemic to South Asia: the long-billed vulture (*Gyps indicus*) and the slender-billed vulture (*Gyps tenuirostris*) (Prakash 2007, 127).

The reason for this decline – the fastest ever happened to a bird species in recorded human history – was discovered in 2003: it was diclofenac, a nonsteroidal anti-inflammatory drug (NSAID) first introduced in India as an analgesic and antipyretic for human use (Oaks 2004). In the 1990s, it was then launched for veterinary purposes, mainly for the treatment of inflammations (such as mastitis), pain, and injury in domestic livestock. Soon thereafter, it began to intoxicate and decimate the vulture population. Surprisingly, while these birds are exceptionally resistant to lethal bacteria such as anthrax, they are unusually sensitive to even small doses of diclofenac. Shortly after consuming meat from the carcasses of livestock recently injected with the drug, they develop visceral gout and die of kidney failure. As vultures are obligate scavengers, they are usually the first to find carcasses and feed on them in large groups, so the body of a single animal is enough to decimate an entire flock. In 2006 and 2015, the production and sale of diclofenac for, respectively, animal and human use, were regulated. Meanwhile, safe alternatives (such as meloxicam) were identified but, in 2017, diclofenac still accounted for 10 to 46% of all NSAIDs offered for sale in livestock treatment (Galligan 2020, 341). In 2019, new research reported a still alarmingly low number of vultures (Prakash 2019, 55). This crisis occurred all over India, but it was in Mumbai that the alarm rang the loudest. Mumbai is home to one of India's oldest scientific organisations, the Bombay Natural History Society (BNHS), and the largest Parsi community in the world.

BNHS, and Dr Vibhu Prakash in particular, first studied this phenomenon at Keoladeo National Park, in Rajasthan (Prakash 1999). This State is part of the so-called 'cow belt', defined as an economic, political, and cultural region that extends in Northern India, from Rajasthan in the West to Jharkhand in the East, where cows are an important element of the religious, economic, and political life. The very large numbers of livestock historically reared in this region and the fact that, in orthodox Hinduism, cows should not be slaughtered, have literally fed the increase of the vulture population. In rural areas, beyond the borders of villages, carcass dumps are part of the natural-cultural landscape, where the bodies of cattle that died of disease, injury, or old age are discarded and left for scavenging animals to consume. Because of the importance that cows have in the life of their owners, and the cheap price of diclofenac, this drug is massively used, not only by qualified veterinarians but often directly by cattle owners, to save the animals from death. When their drug-filled dead bodies reach the carcass dumps, vultures are condemned to a lethal intoxication. At Keoladeo National Park, the local colony of *Gyps bengalensis* went extinct by 2003. On the outskirts of Bikaner, a city in Western Rajasthan, in the Jorbeer Conservation Reserve, a carcass dump that long served as an ideal site for bird-watching

and vulture research, dogs have now filled the ecological niche left vacant by vultures (Subramaniam 2016). Research is trying to demonstrate and quantify the cause-effect relationship between the vulture decline and the increase in the dog population, dog bites, and canine and human rabies cases (Markandya 2008).

Besides regulating the production and sale of diclofenac to avoid further deaths, a vulture breeding programme was launched in 2004 to protect vultures in an artificial, diclofenac-free environment while the drug is gradually removed from cows and the whole natural-cultural environment. Thanks to national and international funding and knowledge-sharing, the BNHS now manages four conservation centres (in Pinjore, Haryana; Bhopal, Madhya Pradesh; Rani, Assam; Rajabhatkhawa, West Bengal) and five more will be built as per the *Action Plan for Vulture Conservation 2020-2025* (Down to Earth 2020). When possible, vulture reintroduction into the 'wild' will depend on the presence of so-called 'Jatayu restaurants', named after the King of Vultures in the epic of Ramayana. Jatayu restaurants, already implemented in Nepal, are vulture-safe zones where vultures are ensured uncontaminated food, by establishing nearby cow shelters that buy or rescue sick, abandoned, or old cows and ensure that they spend their last years of life in a way that ensures their welfare and the survival of the vultures that will eventually feed on them.

In Mumbai, the disappearance of vultures was not noticed by bird experts or cow owners, but by the Parsi community (Van Dooren 2010). Migrated from Iran (Persia in the past, from which 'Parsi' comes from) between the 8th and 10th centuries CE, Parsis are a small community who follow Zoroastrianism. Among the most distinctive features of this religion is how funeral rites are performed. To avoid contaminating with *nasu* (polluting corpse matter) the Earth, Water, or Fire, Parsis practice *dokhmenashini*, the 3,000-year-old tradition of disposing of the dead by exposing them to scavenger birds and the sun. Bodies are placed on stone beds on the roof of a *dakhma*, also known as a tower of silence, which is an 8-10-feet high, circular, rather flat structure with a pit in the middle, where dried bones are eventually collected and mixed with lime for a faster disintegration. In Malabar Hill, in South Mumbai, Doongerwadi is a 54-acre uninhabited, tree-covered land with some *dakhma*, inside which only corpse bearers (*khandia*) are allowed and over which vultures have been unavailable for more than three decades now. Since then, Parsis' bodies have been rotting in the open for months, while the occupants of neighbouring buildings have begun to complain about the stench left by the disappearance of vultures (Bhutia 2015).

Since then, the debate within the Parsi community of Mumbai first, and between it and local government bodies and the 5-km away BNHS then, has been intense regarding whether and how to safeguard the system of *dokhmenashini*. This paper will not go into the details of

this sensitive dispute, for the complete appreciation of which a far more extensive understanding of Parsis' history, culture, and religion would be necessary. Yet it will touch upon some elements that are relevant to One Health entanglements. Broadly speaking, two main scenarios have been discussed (Hinnells 2005, 117). The first one renounces vultures and looks at technology for a new solution. Like the Parsis of Hyderabad, the community in Mumbai had the option to resort to a solar panel installed by the *dakhma* that concentrates the sun rays to the roof of the building and speeds up the decomposition of corpses (Umanadh 2020). From a technical point of view, the drawback of this strategy is that the intensity of sunshine, hence the speed of decomposition, depends on weather conditions: insufficient heat on cloudy or rainy monsoon days will be ineffective; excessive heat could even burn the corpses, which goes against the Parsis' traditional refusal of cremation. From the perspective of an ancient religious tradition, this solution represents an evident departure from it, which only a part of the Parsi community is in favour of (*Parsi Khabar* 2018).

The second scenario involves breeding a local colony of vultures inside a purpose-built 'Doongerwadi Aviary'. The discussion about this project started in 1998 and is not over yet, as several issues (often of One Health nature) have had to be addressed. In 2010, the Bombay Parsi Punchayet (a charitable trust and apex body representing Mumbai's Parsis) commissioned a preliminary project for the aviary to the architectural firm Heatherwick Studio of London. On the firm's website, it is possible to admire the rendering of a huge yet almost invisible cocoon of 30-feet high nets and poles that keeps the dead in the *dakhma* and the vultures and the sun in the sky together.³ The project was meant to be led by BNHS, based on their successful experience with the older breeding centres. Yet, due to a lack of adequate space and facilities, BNHS proposed the construction of a main breeding centre on the outskirts of Mumbai and a smaller satellite centre within Parsi funeral grounds. Because of the high costs involved (for which a partnership between the Bombay Parsi Punchayet and the Government of Maharashtra would have been necessary) and the lack of guaranteed success, the project reached an impasse (Bandyopadhyay 2015). In terms of the sustainability of the project, an important matter regarded the fact that only diclofenac-free human (Parsi) bodies can be fed to vultures. This requires that the doctors or the relatives of the deceased formally certify that no diclofenac (as well as other NSAIDs included in an ever-expanding list of confirmed or potentially toxic drugs) has been given to the patient in the last 72 hours of their life. Alternatively, a test could also

³ <http://www.heatherwick.com/projects/spaces/tower-of-silence/>.

be performed on every corpse to determine its right to be offered to vultures. If this mechanism failed once, the consequences for the entire project would be severe. Some Parsis considered this whole process too laborious and disrespectful of mourning (*Parsi Times* 2012). Another concern derived from the difficulty of reconciling the Parsi rule that only human bodies can be exposed in the *dakhma* with the insufficient amount of food for the vulture colony if no animal carcasses can be provided as a supplement (*Parsi Times* 2012).

At the time of this writing, the Doongerwadi Aviary has not become reality yet and the option of the solar panels has been implemented – temporary or for good, this still has to be decided by the Parsi community. Soon after implementation, the corpse bearers that work in the *dakhma* have sounded several alarms about human and ecosystem health. First, solar reflectors can focus sunlight on only a small part of a body at any given moment, so these people now have to manually move each decaying corpse several times a day, for no less than ten days, for it to be uniformly dehydrated. When there are too many corpses to manage, the *khandia* are told to dump them in the central pit after three days, decomposed or not (Bhutia 2015). Second, the crows that are taking advantage of the absence of vultures and the suboptimal efficiency of sun rays are said (especially in the non-Parsi press) to occasionally drop body parts on the public roads around the Parsi sacred area (Hinnells 2005, 116).

4 Plastic-Fed Cows

Rumination represents an evolutionary adjustment among herbivores, who must constantly be on the alert for predators and thus need a feeding behaviour that allows them to store considerable quantities of food after rough chewing and fast swallowing. For Indian free-roaming cows, a counter-revolutionary adjustment could be advantageous, because their unselective feeding is now turning them into the first victims of one of the major problems of our time: the ubiquity of plastic in the environment and animal bodies, both human and nonhuman. Currently, more than disease, malnutrition, and road accidents, plastic and other inorganic materials (clothes, sand, shards of glass and ceramics, needles, blades, wires, sanitary napkins, and even small electronic devices) are the primary cause of death for India's free-roaming cattle (Government of the National Capital Territory of Delhi 2001, 26). Once ingested, these materials form a stiff pack inside the cow's rumen (one of the four compartments of the cow's digestive system), which continues to grow in size as the animal feeds on more foreign matter. Many of the cows on the streets of India seem well-fed, or they may look pregnant, but according to a veterinarian at the Shri Krishna Goshala in Delhi, at

least 85% of them in fact experience an excruciating death under the weight of the plastic they have consumed (Nadal 2020, 74). In September 2016, the national newspaper *The Times of India* published an article about a cow who was found to have 100 kg of plastic in her stomach (Kaushik 2016). Anyway, India's vast animal welfare community had already known about this problem some years early, thanks to the documentary *The Plastic Cow*.

In 2012, the Karuna Society for Animals and Nature, an animal welfare organisation in Andhra Pradesh, showcased the ordeal of these animals on the screen. Cows are not the only animals exposed to plastic while feeding, but they are probably the ones that ingest the highest amount of it, because while foraging from fruits and vegetable leftovers, they end up eating anything that smells or looks like food. India's garbage collection system is largely undifferentiated, so edible and non-edible waste is discarded together or gathered in the same place. Additionally, most garbage is left in the open - in open garbage bins, in roadside garbage heaps, or in *dalao* (covered structures for garbage disposal hardly closed to the outside) - and is very easily accessible by animals. Plastic ends up in cows' bellies both as single plastic items that the animals unselectively eat, or as the bags that contain household waste. Since these plastic bags are knotted at the mouth, cows, unable to undo the knot or tear the bag (as dogs and monkeys do), eat food leftovers including the plastic. Slowly, over months or years of roaming free on the road, they become filled with plastic.

Unlike other species, cows are also the only ones for which a rumenotomy is the only chance of survival. The documentary shows what a rumenotomy is, and its authors explain that witnessing their first rumenotomy was a life-changing experience.⁴ During a rumenotomy, the rumen is incised via the left abdominal wall of the cow to remove the block. A usually yellowish or brownish tangle that, to me, reminds of knots of sun-drying seaweed on the beach, is slowly taken out, bit by bit, until the rumen of the animal reaches its normal size. If the animal survives the surgery and recovers well from it, their food will need to be controlled for an extended period, to make sure that the same problem does not happen again or too soon, when another surgery could be too risky. As the staff of the Karuna Society for Animals and Nature write on their website,

Performing rumenotomies is not the answer to the plastic cow, only a total ban on plastics and removal of animals from the garbage-dump will solve the problems. We continue the surgeries as it is a life-saving procedure for the individual animal.

⁴ The Plastic Cow Project: <https://karunasociety.org/the-plastic-cow-project>.

In February 2012, two animal welfare associations (VSPCA in Vishakapatnam and Karuna Society for Animals and Nature in Puttaparti) and three individuals filed a case in the Supreme Court of Delhi, for animal rights and a complete ban on plastic bags. This event launched what has been defined as “a collective effort to save the Indian cow from plastic”. Philip Wollen, of the Winsome Constance Kindness Trust (the Australian association that has funded plastic-cow surgeries in Puttaparti and other animal welfare organisations), advocates for action by saying that “The unholy alliance of plastic, carelessness and negligence is not only torturing the Indian cow to death but it has also infected farming communities, rivers, forests and oceans, killing elephants, donkeys, fish, turtles and sea birds” (The Plastic Cow Project’s website).

The case was made that plastic enters not only the body of cows, fatally blocking their digestion system, but also the body of humans each time they consume dairy products coming from plastic-eating cows. In fact, only a small portion of free-roaming cattle, such as barren or old cows or young males that are useless in the milk industry, are completely abandoned (Nadal 2020, 166). Most free-roaming cattle are owned, and they are let to roam either because they are temporarily not lactating (so their owner wants to save on their food) or because their owner does not want or cannot provide for their food. Until they reach sexual maturity and the process of impregnation-lactation-impregnation is started on them, it is not uncommon for female calves to be tied inside *dalao* (garbage collection sites) where they can fill their stomach on rubbish instead of milk or fodder (Nadal 2020, 164). Ironically, the garbage trucks that regularly empty the *dalao* often have the image of a cow nursing her newborn calf painted on the back. Since the process of the formation of the plastic tangle takes time in their rumen, these animals’ body is and remains contaminated for a long time, before or during lactation. Moreover, through cows, plastic ends up in the body of vultures as well. During post-mortem examination, it is not uncommon to find a significant amount of plastic, crockery pieces, and other non-edible items in their stomach (Abi Tamim Vanak, personal communication).

In May 2012, in response to the Plastic Cow Petition, the Supreme Court announced that it may be considering a total ban on plastic bags. Since then, the process has gone through several phases. In 2015, the Plastic Waste Management Rules went into effect at the national level, increasing the thickness of plastic bags so that their cost would discourage people from using them (Sambyal 2014). In early 2017, in Delhi, increasing environmental concern pushed the National Green Tribunal to ban the manufacture, import, sale, and use of bags, cutlery, cups, and other forms of single-use plastic. Each State issued its laws, the enforcement of which was nevertheless slow and patchy. Meanwhile, animal welfare activists have continued to urge

citizens to dispose of domestic waste in an animal-friendly way, placing edible food in newspapers or on the ground and inorganic trash in hermetic containers and sites dedicated to that purpose.

5 Conclusions

The three cases presented in this paper show very well the level of complexity that One Health entanglements can reach, and the implications that this has on various aspects of the life of multispecies societies. Even though most Bishnois are born into the community and are shown how to healthily co-exist with the other elements of their ecosystem, every person who is ready to apply the 29 principles set by Guru Jambheshwar can join this group and their lifestyle. The Bishnois tenets involve almost all aspects of a person's life, including faith, personal and house hygiene, social human relations, the use of environmental resources, and the relationship with animals. For Bishnois, these rules are not meant simply as guidance on how to live, but also principles worth their death if this means saving a blackbuck or a *khejri* tree. For the Parsis, the absence of vultures leaves their dead deprived of the comfort of tradition and turns them into a source of environmental pollution that the community is struggling to find a technically-efficient and religiously-acceptable solution to. For Khoeste Mistry, a trustee of the Bombay Parsi Panchayet, the collective decision of building the Doongerwadi Aviary "would be a marvelous statement, both for conservation and ecology, and because we would also be being faithful to our theology" (*Parsi Khabar* 2011). In rural areas, those who live and work in cattle carcass dumps are now eye-witnessing the redistribution of ecological tasks among animal species, and the new dynamics of transmission of diseases like canine rabies. Along every street of urban and rural India where plastic waste is discarded inappropriately, cows are dying from a slow, painful, and silent death. While the environmental degradation caused by the mismanagement of plastic is there for people to see, the extent of the ordeal that the Indian cattle population is going through is hard to imagine until a rumenotomy shows it in its sad brutality. Meanwhile, whenever people consume dairy, they are reaping the contaminated fruits of their lacking or insufficient care for environmental health.

India's apex bodies in the fields of human, animal, and environmental health are working to build a solid One Health infrastructure at the institutional level (Asaaga et al. 2021). While this is commendable, it is equally important that the country – such as any other in the world – looks at its more or less recent history of ante-litteram One Health issues to understand and learn from how the affected communities experienced, understood, debated, and probably success-

fully managed them. India's rich cultural and religious history can be a window through which to observe current and future threats to multispecies health and to secure human, animal, and environmental wellbeing. The social and historical sciences and the humanities, which are still a minority in One Health research, have a crucial role to play.

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On Thin Ice

Nenets Reindeer Herders’ Changing Perception of their Environment After Conversion to Evangelical Christianity

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Abstract In this paper, I will focus on Nenets reindeer herders’ changing perception of their environment after conversion to evangelical Christianity. Until recently they regarded the landscape to be populated by numerous sentient beings with their own differing agendas. I suggest that conversion of Nenets families has led them to reinterpret much of the earlier intricate forms of agency into largely one kind of demonic agency in which more or less respectful reciprocity with spirits is discontinued. This shift informs directly how people navigate on the land and water, perceive their environment and talk about their relationship with it. I discuss these issues using a pair of notions, i.e. the practical mastery of one’s surroundings and the mental map-reading. My central argument is that conversion creates a certain shift in these perceptions and practices related to the environment and the spirit world.

Keywords Animism. Evangelical Christianity. Conversion. Ethics. Ontology. Navigation. Nenets.

Summary 1 Introduction. – 2 Navigators or Wayfinders? – 3 Embracing God’s View. – 4 Thin Ice and God’s Rage. – 5 The Master of Water. – 6 Demons or Angels? – 7 Conclusion.



Peer review

Submitted 2022-03-23
Accepted 2022-06-14
Published 2022-07-27

Open access

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Citation Vallikivi, L. (2022). “On Thin Ice. Nenets Reindeer Herders’ Changing Perception of their Environment After Conversion to Evangelical Christianity”. *Lagoonscapes*, 2(1), 55-74.

DOI 10.30687/LGSP/2785-2709/2022/01/003

1 Introduction

In the late 1990s and early 2000s, a few hundred Nenets reindeer herders in the Great Land tundra¹ rejected their animist ways and have been trying to adapt to the new Christian life since then. Russian-speaking Baptist and Pentecostal missionaries had come to teach their faith to formally unschooled and illiterate nomads. This meant learning new words, values and ritualistic gestures which all were said to be necessary for achieving the eternal life guaranteed by the only true God there is. This mission encounter has made a considerable impact on one's relation to oneself as well as on the pattern of sociality in the Nenets communities as the new religious regime involves privileging relations with other Christians and discouraging everyday engagement with the 'pagans'.² The latter are told to be involved in sacrificial rituals, drinking vodka or singing epic songs about 'demonic' beings. In short, almost everything that was previously considered as necessary regarding the spirit world had to be abandoned or outright destroyed. Most conspicuously, all the spirit figures (*khekhe*) that were ritually fed from time to time had to be burned in converted families (see Vallikivi 2011, for more detail).

This cultural shift has been significant. The Nenets converts have become part of the globally widespread process in which a highly organised and institutionalised religion (conservative Baptism and Pentecostalism) with an explicit moral code transforms the experiential world of intricate, often tacit relationalities with (most of the times) invisible agents of the tundra. Reindeer nomads who have sacrificed to spirits throughout their life made a decision and converted to evangelical Christianity, proceeding with daily praying and the Bible reading, hosting pastors in their tents and occasionally visiting church services in Russian settlements. Obviously, this shift has had a noteworthy impact on their relations with numerous agents in the landscape such as the dead ancestors, the sky god Num, water and mountain spirits and others who not that long ago were given gifts, petitioned to and asked various favours on regular or particular occasions.

This research has been supported by the Estonian Research Council (PRG1584). I would also like to thank the two Reviewers and the Editors for their suggestions.

¹ This is the area that lies between the Pechora River and Ural Mountains. In Nenets it is known as *Ngarka Ya* and in Russian as *Bol'shezemel'skaya tundra*.

² 'Pagans' (R. *yazychniki*) is originally Christians' term about non-Christians. Nowadays there are also those who identify themselves positively as 'pagans', thus distancing themselves from the Christians.

In this paper, I will focus on one particular phenomenon which is the reading³ of one's environment after conversion to evangelical Christianity. Until recently, the landscape was seen to be populated by numerous sentient beings with their own differing agendas, at the same time, showing continuity and co-substantiality across the human and nonhuman species. I suggest that conversion of Nenets families has led them to reinterpret much of the earlier intricate forms of agency into largely *one* kind of demonic agency in which more or less respectful reciprocity with spirits is discontinued. There is a recognisable tendency from situated forms of relation-making with these invisible agents, who have specific characters and particular moods, towards the reading of one's environment through biblical guidelines which call human beings to reform one's self in order to please the only God and achieve thus salvation. However, there are those converts who show inventive ways when dealing with the past heritage, partly because their reading of the scriptures offers various continuities with animism.⁴

2 **Navigators or Wayfinders?**

The missionaries and converts often talk about following the narrow path after Jesus. The ultimate aim of this moral navigation is to earn the eternal life in thereafter. For discussing these ontological and ethical shifts in conversion, I focus on two notions from the anthropological debate in human spatial orientation, which are practical mastery and the mental map approach. Although this debate concerns physical movement on the land, I regard these notions useful for delineating the spiritual and moral changes in conversion. I propose that, with the arrival of evangelical Christianity, there is a tendency to look at one's environment in a 'cartographic' manner in which one has to recognise what one can or cannot do following the fixed legend (e.g. the biblical rules) that is the same for everyone. This quality of fixity is a completely new experience for the nomads.

For some time, there has been a lively discussion about the ways how indigenous people find their way on the land, how they perceive their environment and how they acquire specific skills in it. Perhaps most prominently in this conversation, Ingold (2000) has argued that northern nomads and hunters do not engage in map-like navigation

³ This is a metaphorical use of the word 'reading' here. I am not following the Geertzian or any other similar tradition in anthropology which sees culture as a text.

⁴ It has to be noted the '-ism' in 'animism' is somewhat a misnomer here, as it lacks a similar codified structure as Protestantism or other institutionalised versions of (world) religion (see Vitebsky 2017, 6).

but in more intuitive wayfinding what he calls a dwelling perspective. He argues that indigenous people move around by being fully immersed, having embodied memories from their earlier experiences and relying on others' accounts. They have an ongoing practical engagement with nonhuman agents in the surroundings while being on the move. In other words, they do not look at their landscape from elsewhere, from above, nor do they try to correlate their whereabouts with a cartographic map but they are perceptually and directly involved with the world around them. Ingold writes:

To know one's whereabouts is thus to be able to connect one's latest movements to narratives of journeys previously made, by oneself and others. In wayfinding, people do not traverse the surface of a world whose layout is fixed in advance – as represented on the cartographic map. Rather, they 'feel their way' through a world that is itself in motion, continually coming into being through the combined action of human and non-human agencies. (2000, 155)

One of the key notions Ingold uses in this (e.g. 2000, 167-8) and later works is *affordances*, which he borrows from ecological psychologist Gibson who argues that in the world of physical things an affordance of the environment is "what it *provides* or *furnishes*, either for good or ill" (Gibson 2015, 119; italics in the original). A stone which invites to sit on it as it has a convenient shape and height for a tired traveller can be regarded an affordance. In a sense it has agency as that affordance emerges from the object itself.

I find this notion to be useful for my discussion here about changing perception of the environment in a religious conversion. However, I would use it more loosely than Ingold by stretching its use to more reflective and social dimensions. In my view, affordances are most of the times rather ambivalent requiring not only earlier experience but frequently also a conscious choice. Furthermore, in an animist setting, these are often connected to spirits or other nonhumans that humans share their environment with. Take the lake ice. If thick enough, it permits making a shortcut over it or fishing on it. Yet, if it is too thin, moving on it should be avoided. Perhaps it affords support to a child but not a reindeer harness that weighs ten times more than the child. As judging the situation well may be an issue of death or life, this requires conscious deliberation. And furthermore, part of it may be related to knowing whether the particular place has an active presence of a spirit who might want to harm an incautious person.

Ingold's focus is mainly on unmediated direct perception of humans in their environment. He has been criticised for downplaying the importance of conscious reflection in spatial orientation as his primary attention does not explain more cognitive aspects of navigation (Istomin, Dwyer 2009). However, anthropologists with a cogni-

tivist approach tend to go to the other extreme. For instance, Istomin and Dwyer portray Nenets reindeer herders to be primarily calculating navigators who pretty much look upon themselves from above executing their moves on the terrain according to a map-like plan for making shortcuts and so on (Istomin and Dwyer 2009; 2021; see also Ingold 2013).⁵ They also largely ignore the local perception of the landscape being inhabited by various spirits that influence actual navigation practices, such as avoidances of certain places because these are deemed to be dangerous.

In his analysis of the Siberian Yukaghirs, Willerslev (2007) has proposed a more balanced account in which he tries to overcome the dichotomy between the Ingoldian dwelling perspective and the approach that stresses the role of conscious reflection. He argues that learning to navigate needs both practical engagement with the environment which relies both on being taught by more experienced hunters who point out significant features *and* discovering the environment by oneself via careful observation (2007, 168). The engagement with the spirit realm requires both first-hand perception and concepts and stories about them that circulate in public, allowing reflection on unusual events and shaping thus future decisions. Taking this into account, it may be useful to see affordances as not only physical but also discursive and ethical, as Keane (2016) has shown them to be (more below).

Although initially they are meant to discuss spatial wayfinding, I suggest that practical mastery and the mental map approach are good heuristic notions for analysing changes in ethical self-formation and multispecies relations in conversion from animism to Christianity. In a highly dynamic mission encounter such as the one in the Nenets tundra, dwelling-like wayfinding and map-based navigation exist side by side. On the one hand, reindeer herders continue to rely on their practical mastery for successful movements in the tundra. On the other hand, people are required to know their way through a world that is governed by new moral rules instituted by one supreme

⁵ Istomin's and Dwyer's view regarding the Nenets is anecdotally supported by Golovnev who presents a Nenets herder's words arguing that Nenets nomads look at themselves from above when moving around: "[A] Nenets keeping way watches himself like from the sky as a moving dot on the map" (Golovnev in Istomin, Dwyer 2009, 43). My understanding is that Nenets herders do not look at their movement in an absolute map-like frame but use principally relational approach (e.g. depending on the overall direction in their seasonal nomadic cycle). Furthermore, the unschooled Nenets reindeer herders I stayed with did not use paper maps and they were reluctant to consult cartographic maps that I had with me. This seems to be different from formally schooled and state employed herders who have been exposed to such map reading introduced by the Soviets collective farm system. However, things have been changing recently as, with the coming of GPS navigation, pretty much every adult man in the younger generation has started using these when travelling on their snow mobiles.

deity. This can also offer new kind of emotions, including overly courageous movement on the land or being inhibited by certain divine signs which may make one cautious.

3 Embracing God's View

My argument is that with the introduction of evangelical Christianity there has been a move from shifting between perspectives of rather different nonhuman agents to that of privileging one, that of the transcendent judge depicted in the Bible and missionaries' sermons. This is the centre of gravity in this newly acquired value system. Even the acts of demons can only be understood from the viewpoint of 'the only true God' (often mediated by other characters such as Jesus, apostles, etc). One could describe this as a shift from a relational one to an absolute frame in spiritual terms, as there has been a pull towards adopting a mental map that looks at oneself from above and is supposed to constantly judges one's moves. In practice, this viewpoint is actualised only from time to time.

Obviously, this shift does not mean that Nenets converts would stop being attuned to the environment 'in the old way' and use their skills of practical mastery in spatial navigation. But instead of reading intricate signs of spirit masters in particular places (e.g. sacred sites) or dead ancestors (e.g. cemeteries), occasionally adopting their putative viewpoints, converts are more and more engaged in Christian moral navigation, relying on biblical maxims, stories and exemplars. For instance, when one has forgotten to pray before or after the road and his⁶ sledge or snow mobile breaks down, then there is a talk about sins committed which require asking for forgiveness. In the old days, such accidents had to be rectified with offering or sacrifices. These events are all significant for how people have come to read their environment and navigate in it after conversion.

In the new evangelical logic, everything that happens in one's life reflects the quality of one's relationship to God. It thus imposes the ethical focus on one's self and its relation to the transcendent deity which demands piety, constant self-monitoring as well as assessing others' through the prism of absolute good and evil, right and wrong. Keane has described the way movements such as evangelical Christianity work via the active embodiment of the external viewpoint on oneself. He writes that in Christian and some other piety movements there is a

demand for consistency [which] is partly explained by the inculcation of a God's-eye view, a version of the third-person perspec-

⁶ My ethnographic examples here come from Nenets men.

tive from which the faithful is expected to see the totality of his or her life and impose order on it. (2016, 200-1)

The new Christian focus is seeing oneself from another's point view and imagining God's perspective on oneself in moral terms which "posits a single organizing vision" (Keane 2016, 213). In other words, a person becomes an object of thought for him or herself from elsewhere. Keane stresses that God's gaze (or this can be also the state's, party leader's gaze, depending on the movement) is mediated by other people, things and signs around which are all, in Keane's vocabulary, "ethical affordances". He uses the same term from Gibson, as Ingold does, but goes a step further from the corporeal world to that of the social, cognitive and conceptual one and argues that not only physical things but signs, stories, memories can also function as affordances. He writes:

By ethical affordance I mean any aspects of people's experiences and perceptions that they might draw on in the process of making ethical evaluations and decisions, whether consciously or not. (Keane 2016, 27)

As a stone can offer itself up as a chair, if circumstances are right, so do names, concepts, symbols, habits, narratives that allow people to be evaluative towards oneself and others.⁷ Whether one or another idea, sign or thing is picked up and used depends on various circumstances, as noted above.

The following ethnographic example demonstrate how in the Nenets tundra earlier experiences with the environment that is taken to be alive, entailing elements, spirits/demons and the heavenly God function as affordances which reflect both aspects of a dwelling perspective (practical mastery) as well as following a mental map (adopting the view of a divine judge).

4 Thin Ice and God's Rage

The Nenets reindeer herders I have stayed with over the years live in the Great Land open tundra with abundant lakes and rivers (only a few reach thinly forested patches in the southern areas and some live in the Ural Mountains on the border of Europe and Asia). I have travelled with nomads between their southern winter pasturelands

⁷ See Lukin (2020) who offers an interesting discussion on Keane's semiotic affordances in the Nenets oral tradition.

and northern summer areas throughout all seasons.⁸ An anthropologist moves around usually with a host family in this part of the world. But in rare cases of individual travel with a reindeer harness in the flat treeless tundra, I have experienced how difficult it is to find the way from one location to another. Not finding one's way is not the only problem. There are various dangers when moving around which can be fatal such as climbing mountains, crossing water bodies, losing one's harness in the snowstorm, suffering hypothermia and so on.

Let me give a brief ethnographic example of what I mean by the changing perception of the environment which involves adopting God's-eye view in this newly converted community. Middle-aged Yegor⁹ had recently converted to Christianity with his entire family. Earlier he had participated in sacrificial slaughtering of reindeer and made offerings to the spirits dwelling in rivers, lakes and mountains - not too often and "not with an aim to become rich as many did", as he insisted. But by the time when I first met him, he was a devout Baptist who talked abundantly *about* God and talked abundantly *to* God.

One morning, after reading a passage on God's rage, Yegor said: "If we do not remember God, the rage of God would come close to us". He added: "We need to ask for forgiveness where we did not do the right thing". The same day the two of us drove our sledges over the autumn ice of a lake. Water emerged from the trails, showing how risky it was to make a shortcut over a layer of thin ice. After stopping on the other side, Yegor said: "You see, this water is like God's rage. We should keep to the edge of the lake". It was his routine practice to recall the Bible passage read on the same day and ask "what is God trying to tell to me".

In a way, Yegor was reading the landscape in a 'practical' manner, as he had always done, only his cosmological and moral interpretation had shifted. At that moment, instead of just passing on his ice knowledge, which he still kept doing from time to time (e.g. clear autumn ice is safer than old cloudy spring ice, etc.), or instead of telling about the signs in the old way which would have linked the precarious situation on the ice to the activities of local spirits, he chose to explain the ice breaking behind our sledges as the sign of God's action. Yegor was measuring events through the Bible, reading it slowly but patiently himself or relying on interpretations given by visiting Russian missionaries (see also Vallikivi 2009; 2014). His everyday duty, as he sensed it, was to take the divine gaze from above on himself, others and the world, listen to God, be open to unexpected mo-

⁸ I have done fieldwork among Nenets for 19 months between 1999 and 2017, including one year of migrating with a few nomadic families (2006-07).

⁹ Personal names here are pseudonyms to protect my interlocutors' anonymity.

ments of divine intervention and also to tell about it to others, including me, 'an unsaved person'.

Each trip, however practical in its ends, was cast as a moral journey. Converts prayed before leaving the camp in order to have God's blessing for the journey to be safe. After reaching the destination, they thanked God for having arrived unharmed. Everything was spoken in either terms of blessings or in cases when serious obstacles or problems emerged these were seen as God testing His children. Lakes and rivers were regarded as one of the most dangerous areas where one had to be extra cautious, both to the physical and spiritual qualities of the surroundings.

5 **The Master of Water**

If I had arrived a few years earlier Yegor would have probably explained this situation to me in an 'animist language'. I had heard non-Christians saying that treacherous moments on the ice may be due to the activity of the water spirit called Yid Yerv, 'the master of water'. This male spirit who in myths lives in an underwater tent with his family and herds fish and sea animals is known to be a dangerous spirit that drowns people and boats. However, as with cosmological and moral dualism being not that stark in animism as in Christianity, it is regarded to be possible to influence Yid Yerv's plans and make him even into a cooperative being, especially when fish or sea mammals are needed.

Drowning is one of the main causes of early death, especially for men. This is related to the dangers of ice-cold waters in the region where people are not able to swim, and quite so often, this happens in a drunken state. Old timers say that when a person falls through the ice into the water, this is seen as the water spirit taking the person to his realm. Although I have not heard it myself, there are comments in the literature that say that no help is offered to a drowning person as he or she is caught by the water spirit and cannot be taken back from the spirit (Khomich 1976, 21-2). The drowned person could become an evil water spirit who would not end up in the land of the dead and continue to be potentially harmful to the living - to avoid this, a shaman had to be called who led the soul safely to the land of the dead (Lar 1998, 35; 2003, 98; Lar, Oshchepkov, Povod 2003, 108).

While in the tundra, I heard several stories about someone's experience of almost drowning. For instance, when a grandfather drove with his granddaughter across the river and the child fell into the water. The grandfather was able to pull the little girl out. He then threw some bread into the water as an offering. However, soon his wife died, which shows that, despite the offering, something went wrong (but as his granddaughter, who told me this story, said, the grandfa-

ther said that “at least the child survived”). People experience such events with ambiguous, ever-changing and never fully knowable spirits, as the animist world (especially once there are no more shamans around) lacks the certainty of evangelical Christianity.

In order to avoid death by drowning, one needs to give something else to the spirit, either as blood sacrifice (*khan*) or bloodless offering (*khangor*). Non-Christian Nenets poured vodka or blood from a ritually killed reindeer to Yid Yerv so that he would give fish and marine mammals and would not drown people and sink boats. In spring before the fishing season began and in autumn before the ice cover was formed, gifts were given to him. This was not done everywhere but only in particular places where the spirit was known to dwell. A good catch and good health were asked from Yid Yerv who was addressed as grandfather with diminutive suffixes (*yiryiko*, *vesakotsya*).¹⁰ In summertime, when crossing certain rivers where there was known to have the water spirit present vodka was poured into them, asking “Yid Yerv, don’t spare the fish, give us fish” (*Yid Yerv, khalyam nyon syayi, khalyam ta*).¹¹

Yegor’s uncle told me of his practice of pouring vodka whenever crossing the river called Khekhemboi: as he explained, this was not only for getting more fish but also making his reindeer stronger in the harness while on a journey. He said that he could sense the stronger pull of reindeer straight away after an offering. This staunch ‘pagan’ explained to me that he had also seen the water spirit with his own eyes when he saw him lifting the edge of the net in the river and they were left without fish. Apparently, no sacrifices were made in right time. Again, one could not be entirely sure what was the reason for the behaviour of the spirit.

The water spirit Yid Yerv was said to have many outer appearances. Most often he was described as a pike fish with antlers, as Tyikinye, a young Pentecostal Nenets woman from the Urals did. She explained to me that the spirit swam around a spruce tree under the water. Tyikinye had not herself seen the spirit but this is what a shaman had told in the old times to her kin when shamans were still active (until the mid-twentieth century). When she was twelve, her family migrated for a summer to the Pike Lake (Pyrya-to) in the Urals, where they caught fish. She recalled that they were warned not to

¹⁰ See also Khomich 1977, 8; Lar 2003, 121-2; Lehtisalo 1924, 44-6; 1956, 123; Khar'yuchi 2001, 107-8; Yevladov 1992, 98.

Other names or related beings of Yid Yerv are the river spirit (Yakha Yerv), sea spirit (Yav Yerv) and lake spirit (To Yerv).

¹¹ In the older literature there are reports that in autumn at the Ob River tied reindeer were thrown into an ice hole as a sacrifice. Also skulls, bones or testicles of a ritually strangled reindeer were thrown to the water spirit (Lehtisalo 1924, 45-6; Lehtisalo 1956, XLIX).

throw stones into the water in order not to enrage Yid Yerv.¹² Tyikinye also said that near the Pike River (*Pyrya yakha*) that flows out from the Pike Lake there is a sacred grove with trees (*khebyidya pya*) and where one can see reindeer antlers hanging from the trees. If someone cut a tree there, the person would go mad or die. She added that some people had seen there the dead people (*khalmer*) and their tent. But not everyone could see them though.

Making sacrifices is not limited only to humans. For instance Yid Yerv also receives gifts from the loon (*nyunya*) – the bird one often hears in the summer tundra is told to make sacrifices to the water spirit by pushing one egg from the nest into the water. According to Tyikinye the loon lays four eggs: it lets one through the nest under the ground and rolls the other one it towards the water and only two are left in the nest. She was not able to say why the bird did this. However, the Nenets scholar Lar notes that in this way the loon brings sacrifice to Yid Yerv and also its loss explains the bird's melancholy call one can hear in the summer tundra (2001, 285-6; 2003, 85). Also, in creation myths the loon is the one who is sent by the sky and creator god Num to fetch the earth up from the bottom of the primordial waters after which the land began to grow. Furthermore, Tyikinye said that the loon was once a human being before Num turned it into a bird (see also Golovnev 2004, 39; Lar 2001, 285-6). Apparently, in animist thinking humanity was not as bounded and stable as the new Christians argued it to be.

As today people note, they would not know these things if shamans had not told that. The latter were able to mediate other species' perspective only because they had a far better access to these hard-to-reach realms.¹³ For their soul journeys, shamans used parts of animals such as bird heads, or bear paws, claws and fangs. Also pike heads and teeth were used for travelling through different cosmological zones (Lar 1998, 29, 32; 2001, 287-8).¹⁴ These attributes attached to the body enabled to take a perspective of particular spirit helpers in various animal disguises that lay people could not. However, ordinary people could also use animal parts as tools in their protective magic or addressees for offerings. I saw pike heads in the box-

¹² Playing at the shore may cause headache to the water spirit, as children are warned (Lehtisalo 1956, 5, 115-16; see also Golovnev 1995, 469; 2004, 305). Some say that stones would hit Yid Yerv's eye (Kharyuchi 2001, 108).

¹³ All these instances show that taking various perspectives and shifts in outward appearances have some similarities with perspectivism we know from Amazonia and elsewhere (Viveiros de Castro 1998; Brightman et al. 2012). This is a topic I have no space to go into properly here.

¹⁴ Also shamans used the loon as spirit helpers, known as iron loons (*yesya nyunya*) who were sent to fly around and check the future fate of the shaman's clients (Lar 1998, 38, 72).

es of spiritual items on a sacred sledge (*khekhangan*) in the camp of a non-Christian Nenets. Also such dried pike heads with open jaws were hanged as apotropaic traps against evil words. When visiting the tent of her relatives, Tyikinye told me that she was surprised to see a dried pike's head (*pyrya ngeva*), mouth full open, tied to the central vertical pole (*symzy*). As she learnt, the pike's head was supposed to catch all the evil words sent by other people and neutralise the curses and gossip that reached the family. The location of the pike's head was not incidental: a pike on the sacred pole which connects the lower and upper worlds has the power to protect the family, as it is a predator that can catch all kinds of malicious agents coming from the lower world.¹⁵

Old timers were used to the idea that various beings had their own unique perspectives on people. Take the *syikhyirtya*, a mythical small people living underground, who keep themselves away from human affairs (see also Lukin 2020, 11-13). They live largely as humans, only leaving their caves in the dark and fishing at night. A Nenets man told Khomich, the Soviet ethnographer specialised on the Nenets,

[w]hen Nenets [not an ethnic marker here, but denoting humans] start moving on the ice in autumn, old men *sikhirtya* say 'the upper people began driving' [their reindeer sledges]. (1970, 64)

This noise they heard was the sound of thunder, as she was explained. This draws a parallel with how Nenets describe thunder in the middle world on earth. This is when sky spirits drive their harnesses and the runners of iron sledges throw out sparks on the stones which people see as lightning (*khekhe tu*) and hear as thunder (*khe*) (Lehtisalo 1924, 19; Kharyuchi 2012, 17).¹⁶

This complex animist world related to the water and ice is comprehensible only from the perspective of various kinds of nonhumans with whom the humans share their living space. However, with the arrival of evangelical Christianity this intricate and multifaceted realm of various kinds of agency is largely homogenised. Now, talk-

¹⁵ There is also a gendered dimension to it with a cosmological underpinning. The Nenets women of fertile age are not allowed to cut a pike, as they are considered ritually impure, triggering unwanted attention by dangerous spirits. And in some areas and clans (e.g. Pyrerka 'pike-like'), pikes are not eaten at all, even if nothing else is left to eat (Tereshchenko 1965, 926). Pikes are considered practically inedible by most Tundra Nenets as they prefer white fish. When a pike was caught in the net, my Nenets friends said that it goes either to the dogs or would be sold to Russians.

¹⁶ Also as Lehtisalo's informant shaman Ganka said, the water spirit can take seven different guises, including that of a human, sturgeon, a large iron pike with antlers that break the ice. He also said that Yid Yerv creates dangerous places in the river mouths as he breathes in under water and the air flows out behind causing whirlpools that sink even big boats (1924, 44).

ing about nonhumans' agendas in any other way than Satan's actions is denounced and avoided. However, there are moments when converts who have known the previous world ponder over the exact identity of one or other being as their own past experiences and the Bible readings work as such affordances.

6 Demons or Angels?

As a result of the recent missionary activity, there has been a clear shift from explaining actions of sentient beings out on the land in particularistic mode to the general scheme of the good and evil. With conversion to evangelical Christianity, most children would not hear about spirits and their particular characters and deeds, at least in detail, but they would learn rather general statements about their evil, demonic nature. The converts would say that it is believing in the demons that triggers these actions but then they may sometimes contradict themselves by depicting evil spirits (*ngylyeka*) as real agents who cause damage regardless of one's beliefs. This is so especially in sacred places (*khekhe ya*) which are carefully avoided because of their mere power. It is insisted that only God could protect humans from such malevolent agents.

The converts' focus has clearly shifted to managing one's relations with God by inspecting one's thoughts and reforming one's character. Also, the past events are reinterpreted from the new vantage point. Yegor's Baptist brother Andrei told me that when he was still a non-Christian he once almost drowned when crossing a river. He got lots of parachute material from the Soviet military in Amderma and he sold it to other nomads for making harnesses. However, the heavy sledge almost drowned him as the current took his harness into a canyon. "I was not yet a believer, but I already addressed God then", he said. Escaping this dire situation, after that he decided to give away much of his spare things including these parachutes.¹⁷ At that moment, he did not discuss the predatory nature of Yid Yerv, his tendency to be active in certain places but he discussed this as a matter of his own greed that left him without God's protection (and making himself vulnerable to Satan's actions).

Baptist converts admitted that when making sacrifices to 'demons' one could indeed get plenty of fish and also their reindeer herds would grow rapidly. Yegor gave me an example of a man who often carried

¹⁷ There is a certain parallel with earlier accounts. When in danger of drowning, one could throw away something valuable such as a rifle as an offering to Yid Yerv (Golovnev 2004, 305) as well as give a promise to be baptised in the Orthodox church (Vennamin 1855, 115).

out sacrifices and his herd multiplied unusually fast. However, soon after, two of his sons died and he himself drowned and most of his reindeer were lost. “The spirit of Satan gives reindeer quickly, but they vanish also quickly”, he told me. From his new believer’s position, Yegor stressed that Satan gave only temporarily in order to corrupt the person and let him burn in the hell forever. However, reindeer given by God were seen to be a more stable resource here on earth as far as people prayed to God, read the Bible, kept communion with the congregation and demonstrated all other necessary characteristics of a believing person. This is why one’s entire focus had to be with God and not anyone else.

Interestingly, this unease with sudden prospering is an issue that is not an entirely novel Christian feature. Such unexpected abundance or exorbitant hunting was seen as a dangerous sign of a future misery. A hundred years ago, Yevladov who travelled on the Yamal noted that when game was abundant this was an ill omen and it was said that the person would die in two or three years (Yevladov 1992, 122). Twenty years earlier Zhitkov also wrote:

Among hunters there is a widespread belief that one should not hunt too much, as Num (God) does not like it when people hunt too much in reserve and to such a Samoyed he can send death. (Zhitkov 1913, 223)¹⁸

The Russian Orthodox Church had been a source of many motifs and rituals since the nineteenth century. Andrei described that, although their grandfather considered himself to be Orthodox (he baptised children etc.; see Leete, Vallikivi 2011, 94–5), he still made sacrifices to the spirits including Yid Yerv. His grandfather visited a few times a church in his youth and, as Andrei explained, at the end of his life he “kind of repented”, as he admitted that he had “not behaved well” in his life. The grandfather had suffered from the bad treatment of his sons except for one son, Andrei’s father, with whom he retained a good relationship, “even when they drank vodka together”. Andrei told me “you see how they live”, referring to ongoing drinking and fighting scenes in his ‘pagan’ uncles’ tents. In Andrei’s words various

¹⁸ It is significant that the sky god Num was mentioned as the moral entity who could punish people. This idea apparently came from the Russian Orthodox Church as its missionaries had been preaching in the tundra since the 1820s (Vallikivi 2003). A couple of times I heard some non-Christians saying “God Nikolai is watching” (*Num Mikola manye*) when someone committed a mistake or transgressed a taboo. This had the potential to shift one’s perspective in these moments to a transcendental judge. However, this did not constitute a sustained practice of self-objectification, as this God did not have the piercing gaze of the Baptists’ God and the notion of sin had a more limited meaning among animists.

violent incidents had taken place in his uncles' families which proved that they were cursed by God and this iniquity has passed down to their children. However, Andrei was ready to see some signs of repentance in his uncles' actions, even if I knew them to be staunch opponents to evangelical Christianity.

When I asked Andrei's and Yegor's brother Ivan (who was the first Baptist convert and the main assistant for Russian missionaries) about the water spirit, he gave me a different answer, implying that there were different kinds, depending on what people believed. Ivan told me of a shaman who drowned and began haunting fishermen on the seacoast. He explained that this was not the dead shaman himself but Satan who had taken the form of a shaman in order to scare the fishermen. The idea was that, although the outer form may change, the essence remains always the same. In Ivan's explanation, the dead cannot do this "because they are dead". However, Satan can take any visible shapes. What people see depends on what they believe, was the widespread claim, even if other times demons are depicted as full-fledged agents, as explained above. This was a completely novel idea that believing had concrete consequences in one's life.

Ivan also recalled how they earlier asked Yid Yerv fish and sea mammals by sacrificing in spring time in a stream that would take the reindeer blood to the sea where the spirit lived. Curiously, he said he was not sure who Yid Yerv exactly was, saying that he was "unable to place it anywhere" in terms of a category of beings. He noted that it is possible that Yid Yerv was "the angel of water" that is known from the Bible, and he argued that, when a person drowns, Yid Yerv gives the person to God if the person is righteous. Perhaps echoing his earlier animist experience, he tried to attribute more concrete personhood to this agent. Although I do not remember him saying where exactly he found this passage, I guess he might have taken it from the Book of Revelations (the text he often read and talked about these days) in which among various wraths blood pouring into the sea is depicted (16,3-7).¹⁹ The idea that different angels preside over different natural spheres is implicit in this passage which matches the Nenets pre-Christian logic. Ivan also noted that sacrificial blood contains the soul of the animal and in this way an entire being is given to the spirit. He insisted that people who made sacri-

¹⁹ The passage in the King James version: "3 And the second angel poured out his vinegar upon the sea; and it became as the blood of a dead man: and every living soul died in the sea. 4 And the third angel poured out his vial upon the rivers and fountains of waters; and they became blood. 5 And I heard the angel of the waters say, Thou art righteous, O Lord, which art, and wast, and shalt be, because thou hast judged thus. 6 For they have shed the blood of saints and prophets, and thou hast given them blood to drink; for they are worthy. 7 And I heard another out of the altar say, Even so, Lord God Almighty, true and righteous are thy judgments".

fices would receive more fish as Satan was capable of giving to those who believed in him. However, this would end with the eternal damnation in the hell, if not repenting in time. The focus was on one's deeds and character and not on knowing the intricacies of the particular spirits' behaviour.²⁰

Obviously, Christianity had brought to the tundra a new practice of objectification as there was a demand to publicly articulate its teachings by means of gestures, symbols and words, introducing new concepts (e.g. "I am sinful") and values ("humans are superior to animals"). These were ethical affordances which worked via particular scriptural phrases such as "God's love" or "God's rage" which one could see on the banners with biblical citations hanging in tents and could hear in everyday conversations. By frequently taking up the topic of what God wants from us, the most devout converts tried hard to make Christian morality a dimension of everything. This is what was called believing, entertaining a particular kind of loyalty towards one God that was argued to hate Satan, His enemy. As we see from these examples, the perception of the environment had become both God- and self-centred.

7 Conclusion

Even after conversion, moving through the tundra still requires lots of knowledge and experience which one can acquire by learning from others and trying out oneself. Wayfinding as a dwelling perspective is thus of great value for surviving in the tundra. But with conversion Nenets herders are coping with a new demand for self-formation on every step they make which makes them think and talk about God and His view on His children who err on the land, their temporary home. We could say that the converts read their environment by combining the old and new experiences and stories in a hybrid way. The particular tradition of literalist reading of the Bible and explications by missionaries offer a mental map, which enables – theologically speaking – to follow the path of Jesus. On the one hand, this was cast as a teleological project which has the end point in ultimate salvation and blissful existence in the world beyond. On the other hand, there

²⁰ This matched with what the leading Baptist missionary once explained to me that for Satan everything was possible in order to hold people back from burning the idols, and that Satan became especially active when he realised that somebody was about to convert. He held that some Nenets would not convert because they had heard about people who had lost their reindeer after conversion. A specific example he gave was about a herder who had converted, but after that could not find any of his reindeer in the communal herd. Despite the missionaries' promise of powerful protection from the Christian God, many were not convinced.

was hoping for the immediate return in terms of growth of family and herd, health and sense of worth.

In this new stark dualist logic, all spirits (now “demons”), including those in the water and elsewhere, are regarded to be of the evil kind. Every so often I heard Nenets converts arguing that looking at things from the spirits’ or demons’ viewpoints was not appropriate, as it would be related to excessive interest in Satanic practices and thus dangerous for one’s relation with God. Some Christians outright discouraged me from asking questions about various spirits as this would be the wrong kind of investment of my time and attention as well as make my interlocutors think ‘in the old ways’ posing a threat to their salvation. In rare moments of juxtaposing the old pagan knowledge with the new Christian one, as with Ivan’s argument on demons and angels, this was to tread a precarious path to speculating on matters that most dared not to discuss.

With the arrival of evangelical Christianity, the attention was shifted onto the self that was not anymore distributed across species but was worked upon with God’s-eye view on oneself. The animist world where loons were ex-humans and made sacrifices to the water spirit had become dangerous if not unthinkable – in a sense impossible and impermissible to think about and certainly not to be conveyed to the next generation. Any trans-species transformations were just the proofs of a harmful belief in Satan that can end in the eternal damnation in hell. The new Christians did not need to share their resources with the spirits and no more respect-based reciprocity was entertained with the spirits who were being disenfranchised of their particular agendas.

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What's in a Model? Shifting Multispecies Relationships in Sakha (Yakutia)

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Abstract This paper explores continuities in multispecies relationships, expressed through art. It delineates these continuities through the study of a nineteenth-century model of a Sakha *Yhyakh* celebration. The indigenous Siberian Sakha people have experienced considerable transformation since the advent of Russian settlers. The story of the *Yhyakh* model illustrates the alterations and continuities in Sakha experiences of multispecies community. It also shows how an interconnected community of human and non-human beings generates aesthetic expectations and affordances that contrast with those of a human-centric worldview.

Keywords Multispecies relationship. Siberia. Indigenous art. Sakha (Yakutia). *Yhyakh*.

Summary 1 Introduction. – 2 Sakha (Yakutia) in the Nineteenth Century. -3 Changing Multispecies Relationships at the *Yhyakh*. – 4 Nikolai Belousov and his Model. – 5 Conclusion: Hybrid Aesthetics in the *Yhyakh* Model.



Peer review

Submitted 2022-03-21
Accepted 2022-07-12
Published 2022-07-27

Open access

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Citation Peers, E. (2022). "What's in a Model? Shifting Multispecies Relationships in Sakha (Yakutia)". *Lagoonscapes*, 2(1), 75-92.

1 Introduction

This article explores the links between contrasting experiences of multispecies relationship, and creativity. I suggest that life within a profoundly interconnected community of human and non-human beings generates aesthetic expectations and affordances that contrast with those of a human-centric worldview. The example presented here – an ivory model carved by a member of the indigenous Siberian Sakha people – incorporates two conventions of aesthetic practice, one related to the Sakha people's older cosmology, and the other to the human-centric perspective introduced through the Russian colonisation of Sakha territory.¹ This model shows how artistic expression can be both an active intervention within a nexus of multispecies relationship that encompasses humans, organisms and landscape, and a passive representation of a human-centric setting (cf. Ingold 2000; Hallam, Ingold 2014). An attention to creative expression therefore must be incorporated into the explication of holistic relational ecologies, and their inhabitants. I will be paying particular attention to a key player in the pre-Soviet Sakha setting – Djöhögöi, the creative being, or *ajyy*, in charge of horses. Djöhögöi *ajyy* made himself visible both in the flourishing of the Sakha people's horse herds, and in the forms of creative expression Sakha people used to communicate with him, as I will explain.

¹ I use the word 'indigenous' to indicate the fact that Sakha people lived in this region when the first Russian colonisers arrived. The English word 'indigenous' cannot be easily translated into Russian; not all Sakha people would agree that they are 'Indigenous' in the Canadian or American sense. I have therefore refrained from using the capital letter (cf. Nikanorova 2019).



Figure 1 The model of the Yhyakh (© Trustees of the British Museum)

The model in **fig. 1** depicts an *Yhyakh* festival. These celebrations have been held for centuries by the Sakha people, as I will describe. The figures were carved from mammoth ivory and pegged into the wooden board in 1866, in Nam *ulus* or region; Nam *ulus* is now in central Sakha (Yakutia), northeast Siberia. The Republic of Sakha (Yakutia) takes its name from the Sakha people, who now make up just over

half of its population.² Its territory rests on a large expanse of permafrost, which continues to preserve the remains of mammoths, including their ivory. The kneeling figure at the front of the model is holding out a wooden vessel – a *choroon* – full of fermented mare’s milk, or *kymys*, to the *ajyy*. The *ajyy* were and still are the non-human persons who sustain Sakha communities through their generous bestowal of the organisms, features and qualities of Sakha (Yakutia)’s ecology. Behind him three helpers are holding similar *choroons*, likely to be filled with *kymys*. In front of him are two large containers, also holding *kymys*, held between poles decorated with what might be silver birch trees – and at the very front are three horse-tethering poles. Around the kneeling figure and his helpers sit the respected guests, and behind this group you can see a pair of men wrestling, a group of women, and a conical summer dwelling called an *uraha* in the top right-hand corner. The figure on the right-hand side is participating in a hopping competition – perhaps the Sakha sport now known as *kyly*.

The model currently belongs to the British Museum.³ It was sent to the Paris Universal Exhibition in 1867, where it was bought by the British Museum’s collector, Augustus Franks. It was probably ordered specifically for the Paris Exhibition, as part of a display of the wonders of the Russian Empire and its peoples: Sakha people did not have models like this at home (Knight 2001; Nogovitsyna 2017). As such, it both constitutes and represents a nineteenth-century colonialist geography. It was sent back to Sakha (Yakutia) for the first time in 2015, as part of a project called *Narrative Objects* based at the University of Aberdeen.⁴ This project’s team consisted of Alison Brown, Tatiana Argounova-Low, and myself. The model was exhibited for six months in 2015 at the National Art Museum in Yakutsk, Sakha (Yakutia)’s capital. I was in Yakutsk for three months, exploring the conversations that emerged as a result of this exhibition – and I returned to Yakutsk for another two and a half months in 2016, on a follow-up trip. During my visit in 2015 I conducted informal interviews with visitors to the exhibition, a survey, and two focus groups, with ritual specialists and university students; I also interviewed artists, ivory carvers, politicians, journalists, historians and art historians. In 2016 I spoke to the various people who had had a particular interest in the exhibition, as I monitored the exhibition’s impact.

² According to the 2010 census, 478,100 Sakha people live in Russia, while 466,500 live in Sakha (Yakutia) (https://gks.ru/free_doc/new_site/perepis2010/croc/perepis_itogi1612.htm) (accessed October 2019). ‘Yakut’ is the Russian word for Sakha.

³ Cf. the British Museum’s page on the model: https://www.britishmuseum.org/collection/object/A_As-5068-a.

⁴ Cf. the website of the project: <https://www.abdn.ac.uk/ysyakh/>.

People in Yakutsk were very interested to see the model, though in some respects it surprised them. Many Sakha people found it to be both intimately familiar, and very strange – “ours, and yet not ours”, as one viewer put it.⁵ They were surprised to see that the people had such large, wide eyes, for example, if they were supposed to be Sakha. When Brown and Argounova-Low first showed pictures of the model at a meeting of intellectuals and ivory carvers in 2013, members of the group asked why the model contains no horses: a large contemporary *Yhyakh* will always include horses tethered to ornamental tethering poles, often wearing elaborate horse-cloths and saddles, and accompanied by their foals. This question animated a strong current in the discussion about the model. It was supposed that horses are missing because a part of the original model was lost: as the photograph shows, the fence does not encircle the entire model space, while some of the ivory figures are missing. The horses must have been in the missing section, therefore. This hypothesis generated a diploma project at Yakutsk’s Art School by Maksim Struchkov and Aiall Makarov, who carved their version of the model’s missing section in 2016, supervised by their tutor Oleg Solovyov. And yet some felt that the existing model was communicating something very important. For example, one viewer said that this model’s carver had wanted the model to come back to Sakha (Yakutia), to make Sakha people reflect, ask questions, and increase their consciousness. This remembering, he said, is the way that the “spirit” (*dukh*, in Russian) of Sakha culture will survive.⁶ What, then, might the model’s carver have been conveying – if he was not simply constructing a model to order, for an unknown and distant audience in Paris?

This paper is another contribution to the discussion about the model in Sakha (Yakutia). One day I hope I will be able to go back to Yakutsk, and put it forward as a suggestion to the people concerned. This suggestion incorporates various remarks made by individual Sakha viewers – along with information from the historical ethnographic literature, juxtaposed against the model’s features.

Thus I explore the co-existence of differing aesthetic conventions within the model, taking the widespread preoccupation with the presence or absence of horses as my starting point. The absence of horses that struck some but not all of the model’s viewers demonstrates the contrast between the aesthetic conventions introduced by Tsarist and later Soviet administrations, and those that emerge from the older Sakha tradition (cf. Peers 2019). Tsarist and Soviet aesthetic expressions are part of the European artistic tradition, which by the late nineteenth century incorporated the understanding that art was

⁵ Author’s fieldnotes (April 26, 2022).

⁶ Author’s fieldnotes (April 14, 2022).

a representation of and therefore separate from real life – just as nature was separate from culture, and human persons from the landscape (e.g. Ingold 2000). As I will explain, pre-colonial Sakha aesthetic practice consisted of interventions into a relational ecology, rather than abstracted representation. Sakha artistic forms invoke human and non-human persons through allusions – as for example the patterns on *choroons* visible in [fig. 2](#) reveal the multi-layered cosmos of pre-Soviet Sakha life (Neustroev 2010; Khabarova 1981). I demonstrate the commitment the model's carver, Nikolai Belousov, had towards evoking the *Yhyakh* in his model, and I suggest that this commitment extended to invoking horses through allusion, rather than direct representation.

A quotation from Tim Ingold's *The Perception of the Environment* helps to articulate the ambivalence of this model:

[Inhabiting the land] should not be taken to imply mere occupancy, as though inhabitants, already endowed by descent with the attributes of substance and memory that make them what they are, were slotted into place like pegs on a peg-board [...]. Rather, to inhabit the land is to draw it to a particular focus, and in so doing to constitute a place. As a locus of personal growth and development [...] every such place forms the centre of a sphere of nurture. Thus the generation of persons within spheres of nurture, and of places in the land, are not separate processes but one and the same. In the relational model, as Leach has put it, 'kinship is geography'. (Ingold 2000, 149)

This model, literally consisting of figures slotted into a peg-board, is both a product of high colonialism, and the expression of shared experience of a multispecies community that pre-dates the Russian arrival. It manifests simultaneously the wide, flat Russian Empire, spread out like a tablecloth and peopled with natives of various types, and the intimate geography of human and non-human kin that generated the *Yhyakh* festival. It is a product both of colonialist forms of art and representation, and of a creativity rooted in a multispecies cosmology, as I will explain. As a colonialist artefact it represents the Sakha community as self-contained human persons in an inert landscape; in this representation human beings are indeed "endowed by descent with the attributes of substance and memory that make them what they are". However the model's careful depiction of the *Yhyakh* also demonstrates the intimate multispecies extended family that conditioned pre-Soviet Sakha life, and within which art – whether visual, sonic or verbal – was a form of action, rather than passive representation.

This extended family could not exist without horses, who were so intimately woven into the fabric of experience that their milk, as

kumys, was central to the *Yhyakh* – while their protector Djöhögöi was frequently invoked. I suggest that the model's capacity to nudge Sakha people into recalling their 'spirit' comes from its evocation of the Sakha people and their land as a 'sphere of nurture' – a place emerging from the shared trajectories of many human and non-human lives, including that of Djöhögöi. Both human and non-human persons were so intimately connected within this sphere of nurture that they were present in every part of the *Yhyakh*: no separate representation is needed to show that they were there. For example, the *ajyy* were present in the words of the poem-prayers (*algys*) chanted during the offering of *kymys*, as I will explain below. Thus Belousov may not have felt the need to place horses at an *Yhyakh* or depict them in a representation of an *Yhyakh*, because the horses, inevitably, were there already. This discussion is relevant to the exploration of multispecies relationship and place more generally. It is an example of the way changing experiences of the relationships between species are linked to changing aesthetic regimes; this link creates the possibility of exploring multispecies relationships through creative expression.

The following section introduces nineteenth-century Sakha (Yakutia), as the setting within which the model was carved. The second section describes the *Yhyakh* festival, as it was changing under the Russian influence. The third section focuses on the detail of the model, and its expression of the *Yhyakh*'s multispecies cosmology, before the Conclusion returns to the debate about the model in Yakutsk.

2 Sakha (Yakutia) in the Nineteenth Century

Nikolai Belousov, the craftsman who carved the *Model of a Summer Camp*, lived and worked in a community that was adapting to a rapidly changing Imperial order. Even though he and his neighbours inhabited a territory that was regarded throughout Russia as the back of beyond, the cares and convulsions of European Russia reverberated through their world, shaping their possibilities and constraints (e.g. Schukin 1844). The nineteenth-century Tsarist Empire was a representative example of the European colonialism of its time, in that a transformation of non-Russian communities underpinned policy and public culture, even if its influence varied across time and territory (Ferro 1997; Brower, Lazzerini 1997; cf. Dirks 1992). Like the other colonialist states, the Tsarist state imagined Eurasia as a flat expanse, to be mapped into administrative units that would govern the people this expanse contained; the territory along with its wilder and more dangerous characteristics – the weather, the flies, the wolves – were understood to be conquered by people from without, rather than shaped within an emergent interrelation between different actors, or species (cf. Black 1991). But the transformation the Russian Empire wrought

was partial, fragile, and inconsistent. As a Sakha man told a Russian Orthodox Priest at the beginning of the twentieth century, his community still "lived by the breath of livestock" (Popov 1910, 99).

The little we know about Nikolai Belousov comes mainly from the work of Efrosiniia Nogovitsyna, formerly Senior Researcher at the National Art Museum in Yakutsk, in addition to some lucky encounters of my own in London and Saint Petersburg (Nogovitsyna 2017). He was described in official documentation as *rodovich*, or as 'native' (Nogovitsyna 2017). Given the region of Sakha (Yakutia) in which he lived – Nam *ulus*, in the Sakha heartlands around Yakutsk – and the intimate knowledge of Sakha life he displays in his work, he is likely to have been at least partly Sakha (cf. Gorokhov 1993).

Nam *ulus* is in the area inhabited by the bulk of the Sakha population when the Sakha people first encountered Russians, in 1631. The archaeological and ethnographic evidence shows that these Sakha communities incorporated a stocky, hardy breed of horse, with whom they had migrated into the region before the arrival of the Russians; contemporary Sakha villages are still home to these horses, bred for their meat (Sierszewski 1993; Crubezy, Alekseev 2012; Forsyth 1992; Middendorf 1878). Squads of Russian Cossacks, travelling quickly across north Asia's rivers from the start of the seventeenth century, tried by various means to force the Siberian communities they encountered to swear allegiance to the Tsar in perpetuity, paying tribute to the Tsar in fur (Wood 1991; Forsyth 1992; Slezkine 1994). These Cossacks were funded by a mixture of private and state enterprise: both the Tsarist state and individual entrepreneurs were keen to profit from the apparently limitless supplies of fur-bearing animals the vast, unexplored territories of Siberia contained (Dmytryshyn 1991; Collins 1991; Slovtsov 2006, 84). These Russian entrepreneurs needed the indigenous Siberians to hunt these fur-bearing animals, hence the tribute-gathering.

By the eighteenth century the fort of Yakutsk had become an important town, concentrating people, supplies and trade in preparation for long journeys of exploration across north-east Siberia and the wider Arctic (Wood 1991; Black 1991). J.L. Black contends that these expeditions, and the literature they produced, were instrumental in creating Russia as an Empire in the minds of both Russians and Europeans (Black 1991). Various richly illustrated books of the peoples of Russia disseminated visions of 'wild Siberian tribes' and their shamans, which could sit beside stories of other Imperial peoples – as the Russian Section with its models, drawings and yurts sat alongside equivalent displays at the Paris Exhibition (Knight 2000). Even if the Russian colonisation of Siberia had important distinguishing characteristics, during the eighteenth and nineteenth centuries the Tsarist establishment both presented and saw itself as a European Empire, on a par with the others (Ferro 1997; von Hagen 1997; Brower, Lazzerini 1997).

Accordingly, from the seventeenth century the Tsarist state attempted increasingly to draw Sakha populations into its institutions and their geography, through censuses, taxation, and Christianisation (Wood 1991; Forsyth 1992). Sakha populations had to negotiate shifting constrictions and their concomitant opportunities, as Tsarist policy developed. As part of this, movement and location changed; this shift consisted largely of a transition from nomadic horse-herding to settlements (Sieroszewski 1993; Middendorf 1878). Over the nineteenth century, in particular, large numbers of Sakha people began to grow wheat and vegetables, like the Russians; their increasingly settled lifestyle favoured dairy farming over horse-herding; Sakha people joined gold prospectors or became merchants on a par with Russians (Basharin 2010; Sieroszewski 1993; Middendorf 1878; Popov 1910). Ivory carving was another trade picked up from incoming Russians (Sieroszewski 1993; Ivanova-Unarova, Alekseeva 2021). The ethnographers Alexander von Middendorf and Waclaw Sieroszewski claim that Sakha communities continued to keep herds of horses throughout the nineteenth century nonetheless, because horses were important, beloved animals – beautiful, independent and intelligent, in contrast to stupid, stubborn and sickly cattle (Sieroszewski 1993, 251; Middendorf 1878). Like colonised populations all over the world, successive generations of Sakha people had to pursue their lives within systems of authority that rejected key aspects of their worldview and experience – and, most obviously, the members of Sakha communities that were known and engaged through the *Yhyakh* festival.

3 **Changing Multispecies Relationships at the *Yhyakh***

It seems that the Tsarist government never banned *Yhyakhs* specifically, although the pre-contact forms of healing that were recognised as ‘shamanic’ were repressed (Khudyakov 2016; Popov 1910). These forms of healing, in common with the *Yhyakh*, were grounded in the Sakha people’s relationships with complex and hierarchical ‘clans’ of beings, which were treated as extended kin networks (Lindenau 1983; Sieroszewski 1993). European ethnographers recognised these beings as gods, guardian spirits and demons – as typical features of an animist worldview. In fact, these beings in their nature and activity cross-cut any distinctions between material and spiritual: they are recognisable both as organisms, meteorological events, or geological forms, and as named persons with life histories and relatives (cf Ingold 2000). These beings were emotional and strong-willed; they were equally capable of kindness and anger. They could be benevolent and creative, like the *ajyy*, with Ürüng Aar Toion, the god of the sun, at their head – or they could be malevolent and destructive *abaahy*. The more powerful beings were encountered in a

variety of complex ways, and sometimes through the specific aspects of life with which they were associated; one of them was Djöhögöi *ajyy*, the creator and protector of horses. Both human and non-human persons could quickly shift their loyalties and position. For example, great care was taken after someone had died, to prevent them from returning as an *üör* – a hungry ghost that preyed on the living, causing sickness and death (Sierszewski 1993; Khudyakov 2016).

There were particular people who had an unusual capacity to mediate or intervene within these relationships, called in Sakha *oyuun* if they were men, or *udaghan* if they were women. These people were identified by European explorers as shamans. Their activities were strongly discouraged or actively repressed as either devil worship, primitive superstition, or both – however Sakha communities contained practicing *oyuun* and *udaghan* throughout the Tsarist period (e.g. Sierszewski 1993; Popov 1910; Khudyakov 2016). The early twentieth century ethnographer A.A. Popov describes an occasion in which an *oyuun* flew up to ask Djöhögöi to increase the horse herds, using a combination of song, poetry, food, craft, and the services of young human assistants (Popov 2008, 116-30). Thus, healing action consisted of negotiation and persuasion, often through the medium of song, poetry, or art. It was grounded in the assumption that the events of daily life – and indeed all actors, whether human or non-human – emerge out of a constantly shifting pattern of relationship (cf. Ingold 2000). The pursuit of a community's flourishing consisted of constant interventions, intended to bring the relationships constituting a particular place into a harmonious state: geography was indeed kinship. Words, songs and artefacts altered the flow of events, therefore; Sakha artistic forms were active, and deeply embedded in community life (cf. Harris 2017; Ferguson 2019; Balzer 1997).

The historical sources show that *Yhyakhs* differed greatly from community to community. They also could be held during a variety of important events, such as marriages. Thus, different ethnographic accounts describe three 'shamans' offering prayers and *kumys* to the *ajyy* deities, accompanied by suites of boys and girls; a single elderly man praying and sprinkling *kumys*; one man pouring *kumys* over a white horse, and even a 'dark' *Yhyakh* held to honour the *abaahy*, involving a blood sacrifice (Khudyakov 2016; Sierszewski 1993; Popov 1910). The entertainments that were incorporated into large *Yhyakh* festivals often included horse-racing. *Yhyakhs* could include individual horses, therefore – but not necessarily. Many ethnographic sources assert that the *Yhyakhs* were becoming smaller and simpler over the nineteenth century, reflecting profound changes in Sakha peoples' ways of life (cf. Middendorf 1878). The horse herds were decreasing, making *kumys* harder to obtain – and people's aspirations and preoccupations were changing. Sierszewski claims that the guests at an *Yhyakh* in Nam region during the 1890s were

more interested in the tent selling vodka and tea than the Sakha drinking vessels, *kumys*, and the decorations made of silver birch (Sieroszewski 1993, 446).

Within this multiplicity of form and purpose, the activity that remains constant through all the accounts is the address to higher, benevolent persons, intended to reaffirm a kind, loving interrelation through prayer, worship intermingled with rejoicing, and the offering of *kymys*. The relationship between Sakha communities and these beings was felt to be so intimate that the protective higher beings themselves – and among them Djöhögöi – bestowed the *kymys*, rich food and beautiful words that were used in their praise. For example, one poem-prayer or *algys* recorded by Ivan Khudyakov in the middle of the nineteenth century contains the following words:

Lord God, arising and living behind the third heaven, you determine everything! Their fate is made by you. Because of that you have made us to give prayers. You, [...] quickly increasing the horses in pens, Kürüö Djöhögöi, you have done everything, you ordered everything. All of us, we Uraankhai Sakha, thank you. Will we say your prayers successfully? (Khudyakov 2016, 243)

The event as a whole manifested and celebrated the loving generosity of these deities, and in doing so assured the future flourishing of the entire community of human and non-human persons – within which Djöhögöi and his children, the horses, were paramount. The verbal artistry in the prayers was both the expression of a multispecies extended family, and a form of action in its reconstitution of this family. This family and its aesthetic interaction were to survive the transitions brought about by the Tsarist Empire, as both the ethnographic accounts and the model demonstrate.

4 Nikolai Belousov and his Model

Belousov included the recreational activities *Yhyakh* participants would also enjoy – wrestling, and hopping races. The occasion we see in Belousov's model in fact corresponds very closely to the ethnographic evidence – and in particular S.V. Yastremskii's account of two *kumys* rituals in a region close to Belousov's, which took place around the time the model was carved (Yasktremeskii 1897, 19, 22). In both these rituals, one man went down on one knee, holding a *choroon* full of *kumys* – while the shaman or 'eulogist' (*algyyr kihî*) stood next to him, sprinkling *kumys* out of the *choroon* with a spoon, and chanting praise and prayers to the *qjyy*. In another the kneeling man held the *choroon* by its 'one leg', and he wore a "cloth woman's cap with a badge" – a "*tuhakhtalakh dshabaka bergehe*" (Yastremskii 1897, 22,

10). This is exactly the cap the man in the model is wearing, as he stands on one knee and holds a 'three-legged' (*üüs atakhtaakh*) choroon by one of its 'legs'; this is visible in Figure Two. Next to him is one of the holes in the model's base, indicating that a figure should have stood next to him; this hole is hidden behind the birch-tree decoration in Figure Two, but is just visible in Figure One. This figure has been lost – and, from its positioning, it could well have been the shaman or *algyyr kih* Yastremskii describes.



Figure 2 The kneeling figure (photographed by the Author)

This combination of shaman or *algyyr kih* with an assistant holding the *kumys* appears in Jacob Lindenau's account of an *Yhyakh* which occurred near Yakutsk in the 1730s or 40s (Lindenau 1983, 37). Lindenau's journey to the Yakut Oblast' narrowly pre-dates the extensive efforts by the Orthodox Church to Christianise the Sakha people: he is likely to have been describing an event that was closely related to pre-Tsarist Sakha practice. Belousov's model therefore was true to its time and the *Yhyakh* itself both in its form – a depiction of Si-

berian life created specifically for a European audience – and in its representation of the continuities that survived Imperialist change.

There is no direct evidence that the original model was much larger, and contained representations of horses. On the contrary, the evidence in the model itself suggests that only a small section is missing: as viewers pointed out, the model would be completely symmetrical but for one section of fencing, and the angle of the wood supporting the base of the model indicates that a narrow section was cut off. As I have explained, the ethnographic material indicates that Belousov was very committed to the accuracy of his depiction: if an *Yhyakh* required the presence of tethered horses, it seems he would have found a way to include them. Belousov was certainly able and willing to carve horses: another model of his, held by the Russian Ethnographic Museum in Saint Petersburg, contains figures of horses.

If Belousov was a Sakha man of his time, then he must have been as aware of the hosts of beings in his setting as anyone else; he also would have had his place within the ever-moving relationships. The *Yhyakh* was and is an important forum for many Sakha creative genres, encompassing song, poetry, dance and craft. This illustrates the explicit and intrinsic relationship between Sakha creativity and the relational setting. Creative inspiration and skill emerged through interactions between human and specific non-human people: the poem-prayer offered to Djöhögöi is an example of this interaction (cf. Ferguson 2019; Crate 2006). As a talented and successful carver, Belousov is likely to have known he was *ichchileekh* – i.e. his art would have been fostered by the energising beings known as *ichchi*. He did not tease the wood and mammoth bone into the model we now see on his own, therefore: it came into being within a field of relationships that encompassed the *ajyy*, and many more (cf. Hallam, Ingold 2014). Perhaps it can be said that the *ajyy* – and with them Djöhögöi – generously bestowed the model on Belousov, as they bestowed the words of poem-prayers on those who preside at *Yhyakhs*. If Djöhögöi was one of the personalities behind the model, then his children, the horses, are of course embedded within it, and make their appearance felt in various ways. The model invokes horses in, for example, the *kumys* the figures are holding; the kneeling man's 'three-legged' *choroon*, which would normally have its 'feet' carved in the shape of a horse's hooves (cf. Sierszewski 1993, 394); and in the birch tree decorations shaped like horse tails, as one viewer pointed out.⁷ These birch tree decorations also resemble the Sakha horse-hair whips (*deibiir*), which are much in evidence in *Yhyakh* festivals. When the model is seen as the expression of the *Yhyakh*'s multispecies universe, the need for Belousov to include representations of horses disappears.

⁷ Author's fieldnotes (April 25, 2015).

5 Conclusion: Hybrid Aesthetics in the *Yhyakh* Model

At its carving, the model was simultaneously a direct expression of Sakha life, like the prayers and epic poetry transcribed by pre-Soviet ethnographers, and a curious artefact from an obscure Siberian tribe, ready to be displayed and sold to the European public. As a hybrid object, it continues to slip beyond the aesthetic conventions and expectations of its viewers, as it appears to conform to them. Apparently it is a representation of a common event in the Sakha people's daily lives, corresponding to European and then Soviet conventions of depiction: the carver has taken the position of an external observer, and has created figures that represent each character at the event. People are the central focus, while animals and the environment are almost entirely absent – reflecting the anthropocentric emphasis of the Paris Exhibition. Its apparent conformity to European representative genres of art perhaps leads contemporary viewers in Sakha (Yakutia) to assume that it will follow the representative conventions introduced during the Soviet period – conventions that were highly formalised, and which demonstrated the hard distinction between human beings and the natural world that were inherent to Soviet materialism (cf. Yurchak 2006).

The Soviet state in fact accelerated the homogenising trends that the Tsarist state had started, as it inculcated an extreme, materialist version of the separation between man and his environment that had filtered into prominent discourse during the Tsarist era (cf. Hirsch 2005; Slezkine 1994; Volkov 2000). Sakha (Yakutia) and the lives of its people changed even more over the twentieth century, largely as a result of the Soviet administration's attempt to build a modernised, atheist Soviet state across the Soviet Empire. The bulk of the Sakha population moved from hamlets scattered across the forest first to Soviet collective farms, and eventually to Sakha (Yakutia)'s capital, Yakutsk. Modernised forms of farming were introduced, along with a universal secularist education, and a network of institutions devoted to secularist, russified cultural production (Donohoe, Habeck 2011; Grant 1995). Offering *kymys* to creative beings was certainly not regarded as an appropriate use of a respectable Soviet person's time. This separation between humans and their environment was intensified within Soviet-era artistic genres, which became increasingly repetitive as the Soviet period continued: art was primarily a passive representation of a human-focused world, rather than an active intervention in a multispecies ecology. The repetition in Soviet art included a set of conventions that determined the portrayal of the Soviet Union's different ethnic groups; for example, indigenous Siberians like the Sakha were generally given narrow, slanting eyes and high cheekbones.

The *Yhyakh* persisted throughout the Soviet period in various forms, and was eventually the focus of the Sakha cultural revival of

the 1990s: it is now one of Sakha (Yakutia)'s most important yearly events. The *Yhyakh* continues to display the influence of the Soviet aesthetic regime, which was incorporated into it as Sakha people continued to adapt it to their changing political circumstances (Peers 2022). Just as an *Yhyakh* held in the aftermath of sovietisation might include tethered horses, as an externalised representation of their importance, so a Soviet or post-Soviet depiction of an *Yhyakh* would contain depictions of horses. The expectation that Belousov would have included figures of horses perhaps comes from the aesthetic conventions that were established in Sakha (Yakutia) during the Soviet era – along with the surprise to see Sakha people portrayed with large eyes. In fact, the questions people asked have enabled participants in the discussion to identify the assumptions inherent to the Soviet aesthetic regime, and its contrasts with older forms of artistic expression.

And so I would like to suggest to my interlocutors in Yakutsk that the horses are not absent, but instead are imbricated into the model's representation. Belousov was working within a set of aesthetic and representative expectations that differed from the conventions that became so powerful during the Soviet period, and which continue to dominate artistic practice today. I would argue that these respective sets of aesthetic and representative expectations emerge from and articulate contrasting experiences of life and setting, shaped by successive political regimes. I would note the profound ambivalence of the model, representing as it does a crucial and ancient Sakha event for a distant audience Belousov would never have known. I would suggest that the model is simultaneously a diorama produced to order for a colonialist international exhibition – and the expression of an experience of life that pre-dated the Russian arrival, within which humans, animals and the natural world were so closely bound up with one another that a distinct representation of a horse is not necessary to demonstrate that they are “the most important guest” at the *Yhyakh*, as one viewer put it.⁸ The model in fact emerges from the multispecies interconnection that its subject, the *Yhyakh*, was and is instrumental in reproducing. It demonstrates the flux of relationship that engendered pre-Soviet Sakha creative genres, in a depiction of the yearly event that re-harmonised and hence re-established these relationships.

I suggest that the model continues to evoke the human and non-human clans in Sakha (Yakutia), as it testifies to their resilience. As my consultant said, this model offers Sakha people an opportunity to recover the relationships obscured by their political status quo – including their close connection with horses. As such, it remains an

⁸ Author's fieldnotes (April 25, 2015).

active intervention in the Sakha multispecies family. I suggest this model also gives all of us a chance to think about how the persons we live with – who may take a myriad of forms, and whom we do not necessarily perceive, understand, or control – communicate and connect with us through music, poetry and art. Aesthetic experience reveals both the assumptions about multispecies interaction that may dominate a specific setting, and the nature itself of this interaction.

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Yolngu Country as a Multidimensional Tangle of Relationships How ‘Everything is Linked to One Another’

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Abstract This paper explores how Australian Indigenous people express their mutual life-giving bonds with other-than-humans such as animals, plants, natural features, and land in terms of kinship relationships. I will describe an ‘ontology of connectivity’ and a ‘mutuality of being’ among living beings in terms of reciprocal responsibility, interdependence, cooperation and care. In reference to my ethnographic research in Northeast Arnhem Land, I insist on the priority of relating, and on the affective nature of multispecies relationships, and illustrate how these are celebrated, maintained and reactivated through ceremonial songs, as well as new forms of music.

Keywords Australian Indigenous country. Totemism. Multispecies kinship. Ontology of connectivity. Yolngu people. Northeast Arnhem Land. North Australia.

Summary 1 Introduction. – 2 In The Company Of Others. – 3 Totemism As An Indigenous System Of Mutual Life-Giving. – 4 Law and Country as an Ontology of Connectivity. – 5 Places Not Only Are, They Happen. – 6 Conclusion: Holding And Feeling The Law.



Peer review

Submitted 2022-03-14
Accepted 2022-05-20
Published 2022-07-07

Open access

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Citation Tamisari, F. (2022). “Yolngu Country as a Multidimensional Tangle of Relationships. How ‘Everything is Linked to One Another’”. *LagoonScapes*, 2(1), [1-26] 93-118.

DOI [10.30687/LGSP/2785-2709/2022/01/005](https://doi.org/10.30687/LGSP/2785-2709/2022/01/005)

Those who are to be in the world are constituted in intra and interactions. The partners do not precede the meeting; species of all kinds, living and not, are consequent on a subject-object-shaping dance of encounters.

(Haraway 2008, 4)

1 Introduction

This paper explores how Australian Indigenous people experience and negotiate their mutual bonds with other-than-humans, such as animals, plants, natural features, the environment and all states of being in terms of kinship relationships. In particular, I will illustrate an “ontology of connectivity” (Rose 2017, 495; 1999) and a “mutuality of being” (Sahlins 2011) by focusing on the dynamics of an extended sociality (Rose 2001, 4) among different living beings in terms of mutual responsibility, reciprocity, interdependence, cooperation and care. As Sahlins (2011, 15) notes “[t]he same mutuality of existence is involved in trans-specific relations of kinship” and he concludes that “this is no metaphor, but a sociology of moral, ritual, and practical conduct”.

As I did on the occasion of the conference *Humanities, Ecocriticism and Multispecies Relations*, held at Ca’ Foscari University of Venice in 2020, when I presented an earlier version of this paper, I will start by telling a few episodes I recorded during my fieldwork in Milingimbi, a Yolngu Indigenous community in Northeast Arnhem Land, Northern Territory, Australia.¹ What these events bring to the fore is not merely what a person is, as either human or other-than-human, nor simply the notion of agency and sentience attributed to things, animal, plants or natural phenomena (see Merlan 2019 for a review in Australian Indigenous Studies). These notions have, indeed, been central in the questioning of the nature-culture divide (Descola 2005; Ingold 2000), debunking the dichotomies between persons and things, humans and other-than humans, minds and bodies, belief and performance from several broadly defined theoretical approaches within what is known as the “ontological turn” (Kohn 2015 for a review), “interspecies ethnographies” (Haraway 2008), “environmental an-

¹ Established as a Methodist Mission in 1923 and located at around 500 km east of Darwin, Milingimbi is one of the five Yolngu communities in the Northeast Arnhem Land region that extends from Cape Stewart in the West, near Maningrida, and the Koolatong River in the Southeast, near Yirrkala, and includes the settlements of Galuwin’ku (also known as Elcho Island), Gapuwiyak (also known as Lake Evella), Yirrkala, and Ramingining. According to the 2016 census, residents in the Milingimbi community were 1,225, and those in Northeast Arnhem Land region were 14,020 (Australian Bureau of Statistics).

thropology" (Kopnina, Shoreman-Ouimet 2017; Rose 2011) and the renewed interdisciplinary discussion on animism and "new animism" (Harvey 2013). Beyond the notions of personhood and agency, these episodes shift attention to relatedness itself, and further to the nature of relating, in other words, how and when to relate correctly in terms of reciprocal attention, respect and care (Rose 2013a; Bird-David 1999). In Sahlins' (2011) words: "[w]hat is in question is the character of the relationships rather than the nature of the person" (13), or the ways persons "are members of one another" and "participate intrinsically in each other's existence" (2). From this perspective, "kinsmen are persons who belong to one another, who are members of one another, who are co-present in each other, whose lives are joined and interdependent" (11). As Hallowell (cited in Harvey 2013, 15) has noted, what is important is not whether all rocks are considered alive, but how humans relate appropriately with a specific rock at a particular moment (see also Povinelli 1993). As Naveh and Bird-David (2013, 27) elaborate "a full recognition of the working of relationality requires careful attention to diverse, local, specific and *immediate* acts of relating" (italics added). I understand 'immediacy' not only as intimacy or a sociality defined in terms of an organisation of feelings (Myers 1986), but also as affecting and being affected, knowing and being known, in other words, a logic of sensing, a "mutuality of being" (Stasch 2009), or an "interdependent existence" (Sahlins 2011, 12) founded on shared substance, land and cosmogonic events, experiences, food, life conditions, memories, reciprocal care, responsibility acted out in the singularity and depth of each encounter (Tamisari 2006). Exploring the dynamics of relationships with companion species, Haraway (2008, 17) not only insists that "partners do not precede their relating" but she maintains that they are the "fruit of becoming with", "a process of learning to pay attention", to respond and respect (19) in the "dance of relating" when "[a]ll the dancers are redone through the patterns they reenact" (25), an embodied process of acquaintance and becoming along (Ingold 2013, 9 ff.; 2011) with all the contingent challenges and risks, commitment and accountability that it demands.

As I was taught and I learnt on being adopted soon after my arrival in Milingimbi, a person is not a relative only in terms of biological descent or the position (s)he occupies in the local kinship system but is involved in a process of becoming a relative. As Yolngu often say, at birth children follow the father (*ba:paw malthun*) and they belong to his patrimoietry and patrilineal group, yet one's membership is fully accomplished through a life-long process of socialisation which maintains and completely realises, rather than effacing, the uniqueness of each individual (Tamisari 2006, 20).

A Yolngu image that conveys this process of becoming intimately related is the 'fire ashes' or 'charcoal embers' (*ganu'* or *lirrwi'*), as

Yolngu people call the ‘campfire’ or the ‘hearth’. Located in the immediate vicinity of every residential group’s house in the community, the campfire is where food is cooked and eaten, announcements are made, everyday events are discussed, meetings are held, stories and memories are told, baskets are woven and visitors are received.² Given that the hearth is never moved, it also connects the present with the past as the members of an extended family keep on sharing their lives around the same place where their deceased relatives once gathered. However, just as the fire ashes are not simply a metaphor for relatedness characterising the intimacy of the domestic sphere (Carsten 2000), neither does socialisation alone shape the individual’s personality by introducing her to the values shared by a group. The image of the fire ashes conveys the Yolngu principle of becoming-with others, the manner in which one’s individual sensitivity – namely the way in which one opens oneself and pays attention to the other – is called on to verify, define and redefine the fundamental socio-cultural values of the group one inhabits (cf. De Monticelli 2003, 166). A person becomes a relative if, for instance, she spends a long time with others around the hearth, cares for others, shares one’s possessions, participates in a “single sense of feeling” (*ngayangu wangany*) that “is ultimately the value of social equilibrium and social order more broadly” (Blakeman 2015, 399). I propose that this notion of Yolngu sociality based on co-presence and participation is not limited to human beings but characterises the relationships with all other-than-humans, as a process of becoming-with in which all beings are affected by and affect others.

Relating with others is accomplished through a series of encounters before, during and after one’s life, by means of enduring and changing relationships with other beings, including one’s country and everything shaping and dwelling in it at particular times and places. All encounters with other beings, visible and invisible, in the past and in the present, contribute to shaping people as well as the world they inhabit. Despite the rapid social and economic changes begun with the establishment of the Methodist mission in 1923 in Milngimbì, the introduction of welfare policy in the mid-1960s and the institutionalisation of a local government in the early 1970s, Yolngu peo-

² Several anthropologists have noted and explained the basis and logic of relatedness in Australian Indigenous communities as stemming from co-residence, everyday cooperation and ritual association. Sansom (1980, 12) describes how mobs constitute themselves in grounding their “union in histories of shared experience between people ‘who have ‘run together’ for years n years’”. Myers (1986, 91) reports that “one countryman [...] used to travel together”, even though their homelands were separate; and one’s *walytja* (‘one family’ and ‘all related’) are not all consanguineous but “include those with whom one grows up, those with whom one is familiar, those who have fed and cared for one, and those with whom one camps frequently” (110).

ple in this region have been able to maintain mutual-life-giving and caring relationships with their countries and everything constituting them through ceremonial songs. In exploring the centrality and priority accorded by Yolngu to how “everything is linked to one another” (Marika-Mununggiritj 1991, 22), I will conclude by focusing on how Yolngu people have found new forms of music that keep on activating an ontology of connectivity or mutual life-giving bonds.

2 In The Company Of Others

After a few months of my stay at Milingimbi, I noticed that the hems of my dresses had been torn just above the bottom stitching line, and I wondered whether they might have been caught in the washing machine I was using. One day, as I walked into my place – indeed, more of a shack than a house – I caught a glimpse of two small shining eyes on top of a colourful heap of material wedged between the corrugated iron wall and one of the shack’s wood posts. I looked more carefully, and I saw that the missing fabric from my dresses made up a beautifully-built nest that was the home of a small mouse and its offspring. With some apprehension, as I did not like to share my house with such a companion, I asked one of my adoptive sons to help me get rid of the mouse. He looked at me and with a big smile replied that I could not get rid of it because she was my grandmother! And he concluded: “you must welcome her and share your place with her as she has recognised you and has settled here to protect you”. This species of mouse (*nyik nyik*, Northern hopping-mouse, i.e. *Notomys aquilo*) in fact belongs to a group and originates from a territory to which, after my adoption into the Yolngu kinship system, I relate to as, and call, grandmother.

*

At the beginning of my stay in Milingimbi, I was invited to participate in a small hunting and gathering party on a nearby island by a woman who had adopted me as her younger sister. I was strictly instructed to follow her and do whatever I was told while she was looking for yams to gather. It was difficult to keep up with her as she scuttled through the thick bush. After a few hours of no success, I heard my sister introducing me to the environment surrounding us with the following words: “How are you? I’m your relative, your child, please let us find and give us something of your good food. Please, be generous with us. She [referring to me] is a good person, although she comes from far away, she is part of the family now”. Back at the camp on the island where we spent the night, my adoptive brother explained to me that one’s homeland (*ngarraka*, literally ‘bones’) must recognise and

welcome you before sharing its resources. He ended up by affirming: “this is not a supermarket where anyone can enter and buy stuff. You must know the land and the land must recognise you”.

*

George was gathering some water chestnuts (*r**, generic name, *Eleocharis Dulcis*) in a lagoon on his country and these particular corms were unusually enormous.³ George straight away thought that this was a sign that his wife would soon have conceived a child. When his daughter was born, he called her *R**, the generic name for this corm, as it was the plant that announced his daughter’s conception. Furthermore, he gave her a second proper name which could be translated as ‘shining intermittently’. This name is a proper name of Venus, the Evening Star, as well as the Turrum fish (*Carangoides fulvoguttatus*), one of the ancestral beings who shaped George’s land and gave life to everybody and everything animate and inanimate inhabiting it. The connection established by this name between the corm, the fish and the Evening Star is revealed by sharing the knowledge of cosmogonic events characterised by bodily transformations. As they explained to me:

When the Evening Star rose into the sky, it was attached to a thread with which Moon was dragged along. They started from the east and they travelled towards the west. At a certain point, Moon was the first to fall into the sea and transformed himself into a big Turrum fish and was followed by Venus who transformed himself into a small Turrum fish who now follows the bigger fish at the end of the thread.

*

During another hunting and gathering trip on Howard Island, an uninhabited land (*wa:nга*) owned by my adoptive sister’s group, we had just settled down on the sandy beach for the night, when my sister, lying next to me, showed me a cloud in the sky in the shape of a shark. Being related to the Shark group through marriage, she was visibly worried and explained that it was a sign announcing the death of the relative belonging to the Shark group. When we got back home in Milngimbi the next day, all our children welcomed us and announced

³ Given the general secret/sacred nature of the different types of Yolngu names, the association they evoke, the power they summon, the authority they confer and the emotive response they might arouse when they are pronounced, I will omit them by inserting the generic terms, the initials followed by an asterisk (*) or, whenever necessary, by glossing them in English (Tamisari 2002).

that a woman, a patrilineal cross-cousin (FZD) belonging to the Shark group, had passed away during the night.

*

My adoptive son, Keith Lapulung, once told me after he had visited his own country:

The boat's engine stopped, and I walked onto a sand bank. From there I could see my land. I was standing on my mother's land and I felt that my homeland (*ngarraka*) was calling me. Your land can make you cry, you know? These waters were full of stingrays and crocodiles, but I walked in it up to my chest and my son swam in it. Our countries are now empty, but ceremony looks after them.

3 Totemism As An Indigenous System Of Mutual Life-Giving

Australian Indigenous religion and kinship system articulate what has been known as totemism, a notion that has occupied a central role in Western social theory and the discipline of anthropology from its very beginning. The study of totemism, as the relationship between a specific group and a particular non-human being, has misled an understanding of common property regimes by privileging the relationship of each group with its own territory over the regional dimensions of groups' rights and duties as an ecological system "of local responsibilities embedded in mutual interdependencies of management" (Rose 2013b, 10). Furthermore, and perhaps most importantly, past studies "have hindered an understanding of the relational and connective aspects of totemism" (Rose 2003, 6).

In contrast to Malinowski (1948, 44), who had interpreted totemic cults as a means to satisfy one's own food needs, Lévi-Strauss (1971, 236) affirmed that the totem is not an emblem of society as proposed by Durkheim. He argues that it is not 'good to eat', as proposed by Malinowski, but, rather, 'good to think': an intellectual moment in a broader classification system. Various post structuralist critiques, mainly based on Australian Indigenous data, have argued that totemism cannot be reduced to an abstract, logical and unconscious way of thinking based on sharp and rigid dichotomies, such as nature/culture, body/mind, structure/history, rule/practice. Stanner (1979a, 25) was the first to demonstrate that totemism includes ontological elements which are inseparable from the social and religious system strictly linked to the land, what he calls a "oneness": at the same time a totem, an ancestral body, a spirit, a place, a person and a non-human being. Further, against "gallic systematics",

Worsley's (1967, 141, 151; 1955) English empiricist approach to totemism brings to the fore the spurious division between natural and cultural categories and, drawing on his Groote Eylandt ethnography, stresses the complexity of facts. By noting the central role of myths and songs as "essential ingredients of the totemic system", Worsley (1967, 149) concludes by replacing the idea of "totemic schema as an ordered reality" with "agglomerative, arbitrary and fortuitus" as well as historical collections of "items unconnected in systematic logic or in nature" (151). In a similar vein, Hiatt (1969, 91) draws attention to Lévi-Strauss' difficulties in accommodating two important elements of totemism, namely demographic and historical changes, as well as affective sentiments. The former are described by Lévi-Strauss as disrupting the conceptual and orderly classifying of the wise, while the irrationality of the latter is integrated into the system without managing to affect it, despite it being "inimical or irrelevant". In analysing the nature and role of Aboriginal sentiments in totemism, Peterson (1972, 29) insightfully emphasises that the "attachment of totem to locality is fundamental to Australian totemism". He thus concludes by characterising totemism as "the main territorial spacing mechanism in Aboriginal society" (28).

Regarding totemism, following Rose (2003), I would like to focus on Strehlow's work (1970, see also 1978) in which he sets out the basis for a radical rereading of this notion.⁴ Strehlow shifts his attention to the responsibility that each group has for its own territory in order to maintain the species' fertility, not only for itself, but for all the groups in the region. From a regional perspective, Rose (1997; 2013b) stresses socio-political and economic interdependence among groups, and proposes to understand totemism and the associated rituals as:

a structure in which a regional ritual community is also a community of social and ecological reproduction. It is a community made up of politically autonomous groups, each of which is responsible for the well-being of several species and of the other groups. The system is one of interdependence – the rain people, for example, make rain for everybody, humans and non-humans, and they depend on others to fulfil their responsibilities. The kangaroo people depend on the rain people for rain, and take responsibilities for kangaroos. Their actions benefit everybody, including kangaroos. (Rose 2003, 7)

⁴ Ted Strehlow (1908-1978) conducted fieldwork research among the Arrente people in the Central Desert as of the 1930s. Son of the Lutheran missionary Carl Strehlow, he was born in an Indigenous community, and learnt the local language from birth together with English and German.

Thus totemism, from a regional perspective, can be considered “as a common property institution for long-term ecological management” (Rose 2013a, 127). In other words,

[the] management for long-term productivity, control of sanctuaries, protection of permanent waters, refugia, breeding sites, and selective burning for the preservation of certain plant communities and other refuge areas. (Rose 1997, 7)

It is from this perspective that Rose refers to Elkin’s early felicitous definition of totemism as “bonds of mutual life-giving” (Elkin in Rose 2017, 496).

However, the totemic system assumes broader meanings if, in addition to each group’s ecological responsibility, we bring to the fore the central role accorded to experience in Indigenous epistemology and everyday practice, in terms of perception, emotional attachment to one’s own country, participation and affectivity. Multispecies relationships established in the environment are not limited to reproducing social organisation, affirming and negotiating political identities, nor do they simply sustain fertility and abundance that guarantee survival. The value, meaning and effectiveness of Yolngu Law (*Yolngu rom*) should be understood in terms of correct behaviour towards others, feeling, communicating with, knowing and being known by others. These are ways of relating that generate belonging through affectivity, desire and memory: “an organization of sentiments” (Myers 1986), a becoming-with, a logic of affect based on reciprocity, responsibility, singularity and depth of feeling in each encounter (Tamisari 2006; 2018).

4 **Law and Country as an Ontology of Connectivity**

In the episodes I reported above, I used the term ‘country’ interchangeably with land, place and homeland. From an Indigenous perspective, country is not only a geographical location, nor does it simply refer to landscape features. Country is alive with its own personality and character as it was shaped by ancestral beings who transformed their bodies into all aspects of the environment and, through these manifestations, they keep on relating with people. There is also a sea country and a sky country. Each country has its own people and beings who are linked with all the other people and beings that populate other countries in the region: an intricate multispecies network that is rhizomatically interconnected.

Country in Aboriginal English is not only a common noun, but a proper noun. People talk about country in the same way as they

would talk about a person: they speak to country, sing to country, visit country, worry about country, feel sorry for country, and long for country. People say that country knows, hears, smells, takes notice, takes care, is sorry or happy. Country is not a generalized or undifferentiated type of place, such as one might indicate with terms like 'spending a day in the country' or 'going up the country'. Rather, country is a living entity with a yesterday, today and tomorrow, with a consciousness, and a will towards life. (Rose 1996, 7)

Yolngu cosmogony realises and expresses connections between people, land and all animate and inanimate beings in the environment by means of long journeys by ancestral beings who shaped and named the land, bestowed territories on different groups and established a series of laws, social and juridical rules and practices, as well as moral orientations, feelings and desires that are at the basis of, and regulate, correct moral and ethical behaviour among all beings. At each stop along their long journeys across the region from east to west, they left an imprint, a trace, a mark (*djalkirri*, literally 'foot' and by extension 'step' and 'foundation') by transforming parts of their bodies into every being of the environment, spoke a different language, and generated a group of humans on whom they bestowed the land and the responsibility of looking after it. Each country thus shares a consubstantial connection between the ancestral being who transformed its body into the world, the person, and every other being generated, shaped and named there. Humans and other-than-humans are kin as they share the same flesh substance and the same language. The imprint is the foundation of the Law as it enfolds the interdependence, reciprocal participation, the intrinsic substantial and social connectivity among ancestral, human and other-than-human bodies, landscape feature, the name, the action, the animal, and the plant at a specific place.

The term Yolngu people used to refer to one's own country is *ngaraka*, literally meaning 'bones', a term that I translate as 'boneland'. A person's is not only consubstantial with a particular landscape feature, animal, plant or phenomenon, but also with a specific cosmogonic action and a proper name. Not only does a person originate and share substance with the land of his/her patrilineal group, but he/she also relates to other groups' territories in term of kinship: one's mother's country, mother's brother's country, grandfather's or grandmother's country and all beings that inhabit it. People and everything in the Yolngu world belong to a group and they originate from the country owned by that group and are related to everything else in a complex kinship system based on specific rights and duties,

correct behaviour, and moral orientation.⁵ These journeys thus established what Yolngu people refer to as the Law (*rom*), namely moral rules, land title statutes and guidelines regulating all social interactions and political negotiations. From this perspective, each clan is “a multispecies kinship group” based on mutual life-giving bonds (Rose 2017, 496).

Perhaps it is now easier to understand how the she-mouse who started sharing my house could be my mother’s mother, as it is a species of rodent that not only inhabits the land I relate to as my grandmother’s land, but shares her bodily substance, her names, character and ways of being with the very country she shaped and named. Grandmothers (MM, *ma:ri* and FM, *mому*), respectively patrilineal and matrilineal relatives, occupy a central position of the residential group gathering around the same hearth where they look after and care for their daughter and sons’ children (respectively DC, *gutharra* and SC, *gaminyarr*), feeding and teaching them how to speak and how to behave correctly. As with human grandmothers, the she-mouse chose to share my house to look after and protect me. Thus, I should not have been afraid, but I should have welcomed and looked after her as she was my relative. Acting as a good grandmother or a good daughter’s child does not simply imply respecting kinship rules, but paying attention (*ma:rr*), feeling (*ngayangu*) and ‘worry’ (*warrguyun*) for a relative, be it a human or a mouse. Behaving correctly towards all beings is ‘holding Yolngu Law’ (*Yolngu rom ngayatham*), a term comprising different meanings. ‘To hold’ should, in fact, be understood both in terms of observing the Law, that is respecting the rules, and ‘holding dear’ and ‘worrying’, in other words, to experience the Law, participate in it, be next to the other through a logic of feeling (*ma:rr*) founded on the singularity and depth of each encounter (Tamisari 2006; 2014a; 2018, 110).

5 Places Not Only Are, They Happen

If each clan is a multispecies kinship group, similarly, “country is multidimensional” because it is made up of people, animals, plants, rock and soil, waters and natural phenomena, such as wind, rain, clouds, ancestral beings, and presences of deceased persons who have merged again into their boneland (Rose 2000, 177). A person shares her/his substance with a place, the cosmogonic action that shaped it and the proper names embodying that action, as well as the song, dance and design bringing all these manifestations to pres-

⁵ Yolngu society is composed of two patrimoieties and a series of patrilineal groups related by recurring cross-cousin marriages (Keen 1994).

ence during a ritual. If we want to understand the complexity of the notion of connectivity in Yolngu lifeworld, it is not only necessary “without intellectual struggle [to] enfold into some kind of oneness the notions of body, spirit, ghost, shadow, name, spirit-site and totem” (Stanner 1979a, 25). This ‘oneness’ also includes the relations with all other-than human beings inhabiting the environment as well as the songs, dances and paintings activating these relations in ritual. From this perspective, any landscape feature, a person, a name, an animal, a plant and a natural phenomenon implies each other. It is however by becoming visible and powerful through performance that each of these manifestations entraps multiple, ramified and interconnected agencies which thus are distributed in beings, objects and events through time and space. This ‘distributed agency’ is conveyed in the Yolngu image of the footprint (*djalkirri*) as it expresses at once many aspects of connectedness, such as consubstantiality, identification, sequence and trajectory in space and time, similarity and difference, following elders’ teaching, and the process of un concealment or manifestation: knowing the world through sense perception, mainly seeing, hearing and smelling.⁶

In addition, the term *djalkiri* also refers to the correct manner of behaving towards other beings. *Djalkiri* thus not only fuses place and body, but it also marks connections between places and relationships between beings, visualises movement, unravels narratives, embodies names, and reveals the itineraries to be retraced in songs and the actions to be performed in the dances (Tamisari 1998; 2014b; 2018). As Marika-Mununggiritj (1991, 22) says, “the spiritual, religious and social order of connectedness to the land” can be achieved “through the knowledge of understanding everything that is linked to one another”. In other words, we could say that all these dimensions of country are interrelated in an intricate meshwork of relationships which change according to the context and the season. Country should not be considered as the sum of relationships *between* all beings as nodes “in a static network of connectors” (Ingold 2007, 75), but rather as a way all beings relate “*along* their several enmeshed ways of life” (Ingold 2007, 103; italics in the original).

All beings in the country are connected in the way they can communicate their ethnobiological and ethnozoological calendars among themselves: where and when resources are plentiful, reading and interpreting the signs that characterise particular seasons. The presence of certain animals and plants announce what will shortly be happening in the environment:

⁶ I draw the notions of “entrainment of agencies” and “distributed agency” from Alfred Gell’s (1998) posthumous work on *Art and Agency. An Anthropological Theory*.

[w]hen the march flies bite, the crocodiles are laying their eggs; when the jangarla tree (*Sesbania Formosa*) flowers, the barramundi are biting; when the cicadas sing, the figs are ripe and the turtles are fat. (Rose 2013a, 103)

Yolngu continuously taught me to observe and know the world around me: when the wind makes the casuarina tree whistle in a certain place, turtle eggs are plentiful. When the sand is burning underneath one's feet, the hot season has started and people find specific species of fish and tubers at particular places. When long black clouds appear at the horizon, it is the beginning of the monsoon, a season of plenty, with its abundant rains fertilising the land and making everything grow.⁷ As Rose (2013, 103) concludes "[t]his communicative system depends on knowledge" and "active attention". To learn, all beings must pay active attention in seeing the signs and understanding the language.

If every natural pattern, shape, colour and structure constitutes "a world of signs" to Indigenous people (Stanner 1979b, 117), the episodes I described above also clearly show that all beings and the land act intentionally on the shared background knowledge of the social and kinship ties that bind them to one another (Povinelli 1994, 155). Indeed, the first fundamental teachings I was given after I was adopted and thus placed in a specific position in the complex kinship system linking me to people and to everything else in the environment, was to pay attention, read, understand and respond to all signs around me, in order to behave in a correct and respectful manner towards human and non-human others.

This knowledge, taught by previous generations and acquired over many years, is necessary to be a successful hunter and gatherer, to affirm one's own rights and claim one's own authority over country, and eventually become an elder who bears the responsibility of passing on this cultural, political and economic heritage to the next generation.

Yolngu song texts describe that all beings have the ability to connect and communicate in different ways, and, in some cases, they use verbal language (*dharuk*) as well as produce meaning (*mayali*). Among many, the following two examples are illustrative. In the first one,

⁷ Yolngu people recognise six seasons: 1. the season before the rains when the black clouds gather in the sky (*dhulurdurr'*, October-November); 2. the season of the west wind which brings the rains and makes the bush food grow (*ba:rra'mirri*, December-January); 3. the season when new shoots appear (*bayaltha*, February-March); 4. the season when bush foods are ripe and plentiful and the wind blows from the east (*mida-warr*, March-April); 5. the cold season when the rains stop, bush food is still collected and turtle hunting begins (*dharratharra*, May-July); 6. the hot season when everything is dry (*rarrandharr*, August-September).

a unit of a Djambarrpuyngu song series along the coast of Flinders Peninsula describes - with powerful images, sounds and lyrics - a heavy black cloud (*bulunu'*) full of rain rising from the east and looming on the horizon over Inglis Island. As it advances it obscures the sky and darkens the colour of the sea. Its stripe underneath (*rraw*) is black with rain which will soon transform itself into Polynesian arrowroot and *amorphophelius* (*luwiya*). Rain changes direction and, turning around, approaches the coast and finally pours down on the mainland (*makarrlatj barkthun*) at a specific place bringing a chilly breeze that makes one cold (*yapum dharyun*).

The second example refers to how a bird's words become contained in the clouds, a recurrent event described in the songs of many Yolngu groups. Sooty Oyster Catcher (*gadaka*) is flying over the sea crying in a loud and piercing call. His voice is so loud that it is carried for a long way (*warryun*, literally 'dragged'). The Oyster Catcher disappears but, through his sobbing, his call continues by itself (*lalayarrykyarrkthun*). His 'language' (*nandart dharuk*) is speaking whilst crying (*napurrapurra*) and is sent up (*ngal'maram*) to the clouds. The bird's language becomes contained in the clouds (*dharuk wukungur ga gorrum*).⁸ Words inside the clouds separate, thus reaching the countries owned by two Djambarrpuyngu subgroups. The bird's voice turns into words and into clouds, speaks different languages and has different 'meanings'. The bird's voice/language/meaning/cloud originating from each Djambarrpuyngu subgroup's country gather in turn over each subgroups' land and, finally, separate in order to return to hang over the country they originated from (Tamisari 2018, 250; 2014a).

5.1 Safe and Dangerous Places

In the song episodes I recall above, country, as composed by many interdependent beings, is welcoming to its own descendants and hostile to strangers (Biernoff 1977), while natural phenomena and animals can announce a birth or a death, or choose to cohabit with relatives in order to protect them.

Places and countries recognise their own descendants mainly through language and smell, as they share the same substance, and are safe and generous with them. When a person dies, her/his country suffers and becomes barren and silent; when country is harmed and damaged the person and her descendants fall sick.

⁸ The song text suggests that Oyster Catcher's voice transformed itself into the clouds in what I term a process of "morphopoiesis, that is speaking forms into place, the making of place through names" (Tamisari 2002, 99; see also Tamisari 2018, ch. 4.2).

As in the episode I recall above, and on other occasions, the country owner had to intercede. As soon as I arrived on the island where we were to stay for a couple of days collecting yams and turtle eggs, my sister passed her hands underneath her armpits and put her own sweat on my shoulders so that the country could recognise me. However, after an unsuccessful gathering afternoon, she had to speak her own language, reminding her boneland that she was kin and, as such, should have given her some food. As I recalled above, she literally introduced me to the country as a stranger who, in any case, had been welcomed and thus had become part of the family. This episode was the main conversation around the campfire that evening when our brother explained to me that country is not like a supermarket, an impersonal place where anyone can enter and take food in exchange for money. Country is a relative, it is the place where he and his patrilineal relatives originated from and will return to after death. Country is kin, and as with all kin people establish and cultivate a respectful and caring relationship with it based on mutual respect, care and responsibility. A person or a group have the duty to look after country in order to be looked after by it. Looking after country means maintaining and renewing a relationship by visiting and camping regularly on the country, talking to it, and burning it when necessary to facilitate regrowth (Povinelli 1994, 152-60; Rose 1994). Being and working on country makes it happy and ready to reciprocate. Country gives up its riches in reciprocity for being looked after. Being on one's own country, not only for hunting and gathering, but also simply sitting and being there, is an act of caring for and looking after the land that in turns nourishes its people (Povinelli 1994; Rose 1996).

5.2 Conception and Death Signs

Country communicates to a man when his wife is going to conceive. The child to be born shows its 'shadow' of 'appearance' (*mali'* or *wulguli*) to the father-to-be in a place on his country or a patrilineally related country.⁹ The signs announcing a conception are easily recognised as they are events in which animals, plants or natural phenomena interact with humans in unusual ways. For instance, a crocodile that outlives a shooting, a big snake that survived after being run over by a car, an unusually large shark coming close and rest-

⁹ It is interesting to note that the terms for 'shadow' and 'appearance' are used interchangeably to refer to reflexes in the water, a photographic reproduction, a shadow cast by light or a recorded voice. See Deger 2006, 119-20 and 126-7 for a discussion on the Yolngu use and meaning of photography in ritual and everyday contexts.

ing next to a boat, or an extremely large frog that would croak as if it were talking. These manifestations are then verified and confirmed through body marks which are visible on the newborn's body: the greyness of the baby's complexion recalling the shark's skin colour, the tire marks on the baby's leg proving that the run-over snake was the 'shadow' or manifestation of the baby to be born, and so on.

These events, which usually take place while people are visiting or hunting on country, demonstrate how economic practices are cultural, religious and political moments in the development of intricate relationships between humans and other-than-humans in the environment. While people are busy looking after country by visiting, hunting and talking to it, country may reciprocate by showing/manifesting itself in a person who will soon be conceived, thus contributing to the biological reproduction of the patrilineal country-owning group (Povinelli 1994, 133 ff).

Furthermore, as in George's tale reported above, the conception sign clearly demonstrates the way in which, in Marika-Mununggiritj's (1991, 22) words, everything is linked to one another.

While the connection between the plant and the Evening Star dragging the Moon along is made based on a morphological similarity, the connection between the star and the fish is established through their common property of shining intermittently, the star in the sky and the fish's silvery flickering as it swims in the water. According to context, the proper name R*, also a generic name for the corm (water chestnut), can also refer to the Evening star and the Turrum Fish. It will only be through an understanding of how these beings are linked to one another that the generic name for the corm can be turned into a proper name and, as such, refers to the interaction between Evening Star and the Turrum Fish. If the common term refers to a corm on a gathering expedition, it acquires different meanings when it is used as a proper name and linked to the story of Moon and the Evening Star, which transform themselves into the large and small Turrum fish (Tamisari, Bradley 2005).

Indeed, as for conception signs, a person is told of an impending death by witnessing an unusual event or having a vision in real life or in a dream. It is believed that a person announces her/his own death by taking up the appearance of one of her/his group's ancestral beings and manifesting her/himself to a close relative. In the example above, the cloud in the shape of a shark seen by my adoptive sister was the way in which a dying relative belonging to the Shark group was announcing her own death. In another example, a very well-known Yolngu evangelist announced his own death to a close relative by showing himself as a dog, one of the main ancestral beings of his own group, putting his paws onto the church lectern as if he were preaching.

These episodes not only show that everything in the environment is living and sentient but that all beings are enmeshed in their mutu-

al lives and this becoming-with is what gives meaning to agency and intentionality. From this perspective, a place is not merely an identified physical or geographical space and a specific time. As Casey argues, a place often defies given categories.

Rather than being one definite sort of thing – for example, physical, spiritual, cultural, social – a given place takes on the qualities of its occupants, reflecting these qualities in its own constitution and description and expressing them in its occurrence as an event: places not only are, they happen. (1996, 27)

In the examples mentioned above, places, as well as other-than-human beings, happen in a relationship, they have an intentionality and agency when they interact with and respond to others. Indeed, Yolngu notion of country is “more an event than a thing” (26), a multidimensional meshwork of relationships that are activated in contingent simultaneous encounters. In other words, country is a process of interanimation among all beings.¹⁰

Although Indigenous peoples’ preoccupation with signs, symbols and evidence of vitality has been noted and studied by many scholars, not everything is considered a manifestation of ancestral intentionality. Many things are, and remain, just things without any cultural value. To be understood, these interpretations must be considered in relation to the specific social and historical contexts in which power relations are negotiated. The point is that not everything in the environment has intentionality, but rather it has the potential of having it. Everything might be interpreted as a sign when needed according to specific social and economic relationships with the land in a society where environmental knowledge is the currency articulating interactions (Povinelli 1993, 684).

6 Conclusion: Holding And Feeling The Law

In concluding, I turn to Lapulung’s recollection of visiting his country on Flinders Peninsula. This story is particularly significant in relation to what I have been describing as a mutuality of being (Sahlins 2011) and an ontology of connectivity (2017, 495) among all living beings continuously renewed in mutual responsibility, reciprocity, interdependence, cooperation and care.

¹⁰ I draw the notion of interanimation from Basso’s (1996, 55) research on Western Apache relationship between place, persons, names and feeling: “[a]s places animate the ideas and feelings of persons who attend to them, these same ideas and feelings animate the places on which attention has been bestowed”.

Contrary to other parts of Australia, Yolngu people were not forcibly removed from their countries by colonial legislation but converged in Milingimbi after the establishment of the first Methodist Mission in 1923. This process of urbanisation, mainly from the territories in the east, rendered Yolngu people economically dependent on the Mission and guaranteed a captured audience to be evangelised and culturally assimilated through the discipline of everyday life imposed by the missionaries (Berndt, Berndt 1988). Indeed, most of the Milingimbi residents today do not own the land where the community is located but consider themselves as visitors. Like other Indigenous groups in Australia, Yolngu people say that the country they have left behind feels lonely, sad and empty, abandoned and forgotten as it is not visited, looked after and remembered. As Lapulung recalled, he was travelling close to his own country when the boat engine suddenly stopped, an event that could not be explained by a mechanical malfunction. He realised that from his mother's land, where he was standing, he could clearly see the coast of his own country.¹¹ He was called by his own country who was responsible for stopping his engine in order to greet him. While his mother's sea country welcomed him and his son felt safe to swim in what they knew to be shark- and stingray-infested waters, the most important detail of the story was that his own country, at a distance, called him and made him cry. With a sorrowful tone of voice, Lapulung explained to me that he was moved to tears by his country's sadness and loneliness because it had been abandoned by its own people. However, he concluded that the country has certainly not been forsaken nor forgotten as ceremonial songs and dances have kept looking after it.

Indeed, many Yolngu song texts have very detailed and moving descriptions of human and other-than-human deep sense of worry and sadness, feeling of longing and homesickness for one's own boneland. As I argued elsewhere, song and dance do not simply represent the cosmogonic actions of ancestral beings who gave life to the land, but they re-enact their creative and fertilising power (Tamisari 2018). A place is thus a living country that continuously talks and tells all details of its story to people by means of its names, paintings, songs and dances. The other way round, the execution of a painting, a song, and a dance talks of and to a place, and 'makes it happen' again and again, activating its relationships by constituting its history.

Many song texts also present very vivid descriptions and emotional and sensorial experiences of the lush fecundity of plants, the cross-fertilisation among different beings, the beauty of one's country, as well as the emotional nature of the relationships engaging all

¹¹ Adjacent countries are often called 'married man' in English as they belong to intermarrying groups.

beings in reciprocal rights and duties. Song texts thus clearly show that all beings are interdependent not only as they share a common interest in safeguarding and reproducing life, but also in becoming-with-others through a logic of feeling based on reciprocity, responsibility, singularity and depth of feeling in each encounter.

As I argued elsewhere (Tamisari 2014a), songs express moral values and feelings that constitute the affective encounters among all beings, demonstrating that Yolngu Law – the correct way of behaving – must be experienced and felt in order to be applied and observed. Everything must be performed according to the Law and all beings have their own Law. Yolngu people thus talk of ‘the law of kinship’ (*gurrutu rom*), ‘the law of the songs’ (*manikay rom*), ‘the law of dance/ceremony’ (*bunggul rom*), ‘the law of the dead’ (*mokuy rom*), ‘the law of circumcision’ or the “law of discipline” (respectively, *dha-pi rom* and *raypirri rom*). They also talk of ‘the law of the seagull’ (*djarrak rom*), indicating all details of its aetiological behaviour and habitat, its feeding, reproductive habits, but also when, where, and how it flies, deposits its eggs, feeds the young and how it interacts with other beings such as the dugong, the seawaters, the winds, and the clouds. The law of each being also includes their character, intentionality, determination and cleverness (*djambatj*), and especially emotional states that often motivate their actions (Tamisari, Bradley 2005; Bradley 2010).

Songs and dances that express ancestral beings’ compassion, distress, fatigue, or joy are often contrasted to feelings of energy, strength, rage, or courage. In these songs, for instance, the joy of Diamond Fish, who light-heartedly darts in and out of the waves, is counterpoised to Long Tom’s aggressive nature with whom it will eventually have a fight. The violence and roar of the waves in the storm are placed against the firmness, fearlessness, and obstinacy of Stone, who resists them. The disorientation and listlessness of Driftwood adrift in the sea are opposed to the energy and determination of Seagull’s flight, who challenges the storm to take some grass to his/her offspring waiting in the nest. The stillness of the calm sea water is shattered by the Oyster Catcher’s loud call who, deeply moved, cries for Driftwood’s endless and aimless wandering. The mourning sadness of Turtle and the homesickness of Porpoise are played out against the thinking, talking clouds-turned-into-words on their way to the territory of each Djambarrpuyngu subgroup where they belong. The rage, the courage, but also the impotence and pain of Shark who, fatally wounded, wants revenge. Cunning Mouse who tells lies and brings Barramundi and Dog to fight each other in a deadly struggle. Many songs also elaborate on the malice of seduction, and the eagerness and lust of sexual desire (Berndt 1952). In addition, the song texts describe in detail how the environment is perceived through all the senses: the rain that makes one cold and its

sound on Turtle's shell; the seawater lapping over Porpoise's shiny black skin; the first monsoon rain that obscures the sky and changes the colour of the sea; the shimmering of Diamond Fish through the transparent water; the changing colours of Stone being covered by molluscs; Seagull's nourishing beak; the roar of the waves and their bright white foam. Other recurrent senses through which the world is perceived in song include the whistling of the wind through the casuarina trees, the taste of turtle blood, the enfolding reddish light of the sunset, the lightness of a butterfly's wings, the flash of lightning, the rumble of thunder, but also the smell of decomposition and the appearance of festering boils. Songs describe a world that is known through sensory experience and feelings, a way of knowing that changes the observer and the observed, the subject and the object, the sentient and the sensible, the performers and the spectator. It implies an epistemology that does not separate humans and other-than-humans, person and things, cognition and affect, language and body, content and performance, representation and expression (Tamisari 2005, 177). Song and dance do not simply represent the cosmogonic actions of ancestral beings who gave life to the land, but they activate links among all beings in a "tangle of relationships" (Ingold 2007, 4). A place is thus a living, multidimensional and multivocal country who continuously talks and tells all details of its story to people by means of its name, paintings, songs and dances (cf. Rose 1996; Bradley 2010). The other way round, the execution of a painting, a song and a dance refer to a place, or rather it makes place 'happen', it activates relationships constituting country. Understood as a "tangle of relationships" or "meshwork of trails along which life is lived" (Ingold 2007, 3 and 81) and shared among all beings, country, as Lapulung explains, keeps on recognising and protecting him and his descendants, like ceremony has kept on looking after it, nourishing it in order to be nourished by it.

Despite the relocation of many groups away from their countries, the interdependent links among all species are continuously celebrated and kept alive not only through ceremony but also by new forms of rock-pop music by groups such as Milingimbi-based Wirrinnga Band (Tamisari 2021). The lyrics of one of their songs entitled *Great Turtle Hunter* (Caama 1995) transcribed below, describe the turtle hunters' canoe floating on the coral reefs, through a sunset stretched over the deep blue sea, where rain clouds are suspended on the horizon, and the call of the seagull is carried on by the wind blowing softly from the east. The song looks after country by 'singing it up', as Yolngu people would say in English. It celebrates but, most importantly, the song re-enacts the connectivity, the mutuality of being which constitute, as the lyrics point out, the "wisdom and the knowledge of my people". This is a knowledge that, as I tried to explain, is achieved through understanding that everything is linked to one another.

other (Marika-Mununggiritj 1991, 22), “always a becoming, always constituted in relating” (Haraway 2008, 136).

Great Turtle Hunter by Keith Lapulung,
From the album: *Dreamtime Wisdom, Moderntime Vision*, Wirrinya-ga Band, CAAMA 1995.

I

I see the sunset on the open seas
I see the vision of great turtle hunters
Chorus

Take me away across the deep blue seas
Show me around all the coral reefs
Together will hunt amongst the coral reefs

II

I see the canoe amongst the coral reefs
I feel the wind and it's blowing from the east
Chorus

III

I see the rain clouds and it's forming from the east
I hear the sound of the seagull singing
Chorus

IV

I see the figure of an old man standing
He shows the wisdom and the knowledge of my people
Chorus
Take me away across the deep blue seas
Show me around all the coral reefs
Together will hunt amongst the coral reefs

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From *sagua'a* to Ox-Dollars Cattle and Human Assemblages in the Paraguayan Chaco

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Abstract In this article, we will focus on cattle-human relations in the colonisation of two different but connected regions of the Paraguayan Chaco: the Puerto Casado territory and the Mennonite colonies. In particular, we aim at showing how colonisation unfolds through multiple, unpredictable encounters, or what Tsing also calls “contingent lineages”. As these provisional encounters ‘take hold’ through time, they give birth to different worlds and bring different beings into existence. Building on Anna Tsing’s recent work (2015), we trace the historical evolution of these “vulnerable” and “shifting assemblages” of both humans – with their material and financial technologies – and non-humans (animals/cows/grasses). In so doing, we propose that colonisation – the “becoming-necessary” of these aleatory encounters, as Louis Althusser puts it –, rather than a fact accomplished once and for all, is constantly (re-)produced through an incessant flux of “precarious combinations”.

Keywords Cattle domestication. Plantationocene. Ferality. Paraguayan Chaco.

Summary 1 Introduction. – 2 The Casado Territory. – 3 The Age of *Sagua'a* (in the Casado Territory). – 4 Consuming Beef. – 5 The Mennonite Colonies. – 6 The Age of *Sagua'a* (in the Mennonite Colonies). – 7 Ox Dollars, Debts and Machines. – 8 The Grid. – 9 Conclusions.



Peer review

Submitted 2022-03-25
Accepted 2022-06-14
Published 2022-07-08

Open access

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Citation Bonifacio, V.; Maresca, A. (2022). “From *sagua'a* to Ox-Dollars. Cattle and Human Assemblages in the Paraguayan Chaco”. *LagoonScapes*, 2(1), [1-26] 119-144.

DOI [10.30687/LGSP/2785-2709/2022/01/006](https://doi.org/10.30687/LGSP/2785-2709/2022/01/006)

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1 Introduction¹

Since the beginning, humans chose cattle as one of their main allies in the colonisation of the Americas (Bonifacio forthcoming; Ficek 2019; Specht 2019). The first cattle – of Andalusian origins – arrived to the Caribbean island of la Hispaniola during Columbus' second trip to the New World, in 1493 (Primo 1992) and from there they travelled across the vast South American continent following the colonisers' trajectories on land. The role of these domesticated animals, nevertheless, soon escaped human control and big quantities of cattle fled the domus and got attuned – finding refuge in remote areas – to new collectives of beings. These feral cattle received, in the language of the colonisers, many names – *baguales*, *cimarrones*, *sagua'a* – most of them being neologisms emerging at the encounter between Castilian and indigenous local languages (Arrom 1983; de Avilez Rocha 2018).

Feral cattle were put by the colonisers in the same category of escaped indigenous people and slaves of African descent, and more in general likened to “convicts on the loose” (Ingold 1994, 3), interpreting their behaviour as an act of “resistance” to humans (Hribal 2003). Terms like *cimarron*, for instance, were used to define both cattle and rebellious humans, and this very word soon settled in the English language in the inter-species category of “maroon” (de Avilez Rocha 2018). For about two hundred years, the expected alliance between humans and cows was constantly challenged by the latter, and raising cattle in South America – because of the large amount of a feral population – was “far less important than hunting them” (Baretta, Duncan, Markoff 1978, 588). Contemporary geneticists and zoologists refer to the descendants of these first cows in Latin America as “creole” cattle (Martinez et al. 2003), an expression initially used to refer to the local descendants of European settlers and currently used in most countries to indicate the local non-indigenous population of mixed origins.

Beginning with nineteenth century, new breeds (*razas*) of cattle – considered more productively ‘efficient’ than the creole ones – were introduced in South America from different regions of the world. In fact, the controlled breeding of cattle – defined as “the production of desired body and hair qualities through the control of reproduction” (Hribal 2003, 437) – had already become a standard

¹ This article is based on Valentina Bonifacio's research in the Casado territory in the eastern Paraguayan Chaco and on Alessandro Maresca's fieldwork in the Mennonite colonies of the Central Chaco. Maresca received funding from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme (grant agreement no. 772544 IMPACT HAU).

Introduction has been written by Bonifacio and Maresca together; the section “the Casado territory” (chs 2-3-4) has been written by Bonifacio and the section “the Mennonite Colonies” (chs 5-6-7-8) by Maresca.

practice in Europe since the seventeenth and eighteenth century. The introduction of new breeds had the objective to ‘improve’ the creole ones, whose bodies and genetic heritage had adapted to the most extreme ecological conditions.

In order to highlight a crucial moment in the history of human-cattle relationships, we will juxtapose in this article what we called ‘the age of *sagua'a*’ with ‘the age of the grid’. The transition from one age to the other implies the shift from a production system based on the exploitation of mainly creole cattle to another based on the introduction of capital-intensive forms of cattle ranching and ‘improved’ cattle breeds. Although this transition is common to many regions of the world, our aim is to highlight its specificities in the Paraguayan Chaco, in order to show how different ideologies of power, race and progress have shaped its configuration on a local level.

The first cattle entered the eastern part of the Paraguayan Chaco from Brazil at the end of the nineteenth century, although it is possible that the first cows were also brought to the Chaco during the short-lived Jesuit and Franciscan missions of the seventeenth and eighteenth centuries. In this article, we will focus on two different but connected regions of the Paraguayan Chaco: the Mennonite colonies of the central Chaco on the one hand, and a territory governed for more than a hundred years by the Argentinian tannin industry of the Carlos Casado S.A. on the other. Our aim is to show how colonisation unfolds through multiple, unpredictable encounters (Althusser 2006), or what Tsing also calls “contingent lineages” (Tsing 2004). As these provisional encounters ‘take hold’ through time, they give birth to different worlds and bring different beings into existence. By tracing the historical evolution of these “vulnerable” and “shifting assemblages” (Tsing 2015) of both humans – with their material and financial technologies – and non-human (animals/cows/grasses), we propose that colonisation – the “becoming-necessary” of these aleatory encounters (Althusser 2006) –, rather than a fact accomplished once and for all, is constantly (re-)produced through an incessant flux of “precarious combinations” (Althusser 2006; see Tsing 2015, 20).

2 The Casado Territory

In 1887, Carlos Casado del Alisal – a Spanish entrepreneur based in Argentina – bought approximately six million hectares in the Paraguayan Chaco. This large and still uncolonised territory, inhabited by several groups of indigenous people, had been sold to Casado by the Paraguayan government in order to cover the economic deficit caused by the War of the Triple Alliance (1864-70). Casado’s intention was to exploit the immense reserve of *quebracho* trees disseminated in the area and process them in order to produce tannin, a substance

used internationally since the nineteenth century precisely to ‘tan’ leather. Nevertheless, the Carlos Casado S.A. relied since the beginning on a double chain of production based on the industrial production of tannin for international export on the one hand, and on cattle farming for internal circulation and consumption of the other. Next to a dense network of logging centres (where *quebracho* trees were cut down and transported to the river side), the Casado territory was populated by an extensive number of cattle ranches, and a 160 kilometres railway track connected some of the centres to the factory on the river shore. When referring to “the centre” (*el centro*) of the Casado territory, local people refer to the interior of the Chaco, and in particular kilometre 83 of the railway track, rather than to the company town itself, called Puerto Casado.

Since the very foundation of the Carlos Casado tannin industry, cattle were instrumental to men in the colonisation of the Chaco. This aspect is clearly stated in his memoir by Adamo Lucchesi, an Italian explorer sent in 1887 by Carlos Casado to find a location for the soon-to-be constructed tannin factory along the Paraguay river. After arriving to the Chaco, Lucchesi’s first initiative was to import cattle from the Brazilian side of the Paraguay River in order to improve the local (creole) cattle race, which he considered “inferior, half wild and of little value” (Lucchesi 1936, 238). The company town of Puerto Casado began as a small cattle ranch on the right side of the Paraguay River (on the left in the picture) [fig. 1].

The ability of the company to provide its workers with a cheap and constant flow of beef assured their loyalty to it for more than a hundred years. A symbol of wealth and good life, eating beef – initially a privilege of the higher classes both in the Americas (Specht 2019) and in England (Hribal 2003) – was appreciated transversally by all social classes, from managers to lumberjacks and factory workers. Since Casado’s farms were scattered around an extended territory, the majority of the cattle were left free to roam around, and some of them went feral and reproduced on their own into the woods. These runaway cattle were of “creole” breeds, and although well adapted to the aridity of the place, they were “all horns and bone and wild eyes, tough as the devil” (Craig 1935, 184). To improve their breed in a scientific, systematic way, and to produce docile animals, the Casado company established a special centre for cattle insemination at kilometre 11 off the railway track.

The insemination centre, probably founded around the 1960s, had been labelled by the Paraguayan manager – Eugenio Hermosa – as a ‘scientific lab’, echoing the tannin lab that was functioning in the factory. Don Hermosa would teach his cowboys – with intermittent success – to behave in specific (hygienic) ways, and to inseminate cattle according to scientific standards:



Figure 1 View of the cerro from the top. Puerto Casado-Puerto Celina. Chaco, Paraguay, 1896.
Photo by G. Boggiani

Hermosa was the administrator of km 11. He wasn't compassionate, he was mean to me. If I had a machete, or a gun, he didn't want me to get into his lab. You had to get in with clean hands. It made me angry. I told him: "I do not need to get in, if I want to punch you, I can do it on the street". (Ortiz, Eulogio. Estanciero. Puerto Casado, 20 de mayo de 2016)

You can't touch dogs before you inseminate them [the cows]. You can't touch dogs, the whip, or smoke. It is absolutely prohibited. This kills the babies [the bull's semen]. The place has to be clean, really clean. You need to wash your hands, put talcum powder and then gloves. It doesn't have to be noisy. You have to stay calm when you approach the cow. The inseminator has to inseminate quietly. He has to talk softly. (Arce, Benigno. Estanciero. Puerto Casado, 11 de marzo de 2016)

Into his lab, Eugenio Hermosa would inseminate the cows with semen taken from bulls of different races: Nelore, Santa Gertrudis, Hereford, Holanda. Although these races are native from remote places such as India or England, the company bought them from Brazil or from the USA. According to Hermosa's brother, for instance, the company imported his first Santa Gertrudis bull in the late 1950s by plane from King's Ranch in Texas - founded in 1953 - one of the biggest cattle

ranches in the USA. In kilometre 11, workers learnt how to behave with cows in a way that would increase their ability to get pregnant. They observed their behaviour and they designed – at least from the workers' point of view – a context that would make them feel at ease in order to increase the lab fertility rate.

Cows were tamed, very tamed. You need to teach them [how to be tamed] from a young age. You flirt with them, you call them by their name and they come. If they wanted to listen to the radio they would go and smell it, and you understood you had to turn it on. That's how it worked. And if the bull did not want to work, you turned on the radio, you put some polka that he liked and then he would start to... [he laughs] they were really not serious in km 11! (Arce, Benigno. Estanciero. Puerto Casado, 11 de marzo de 2016)

Through the insemination centre of kilometre 11, a new 'scientific' way of handling cattle – based on a close control over their reproductive functions and on the 'betterment' of their genetic heritage – was introduced in the Casado territory. In such a controlled environment, workers would call "theft" (*robo*) events such as bulls jumping the fence and impregnating cattle in a natural way, in an act of rebellion towards the limits imposed upon them. Ideally, all cows had to give birth at the same time, be vaccinated at the same time, and produce offspring that would grow up at the same pace. This new way of managing/governing life can be compared to a plantation system. As Tsing writes, in fact, "since the time of the plantation, commercial agriculture has aimed to segregate a single crop and work towards its simultaneous ripening for a coordinated harvest". This unified rhythm of growth and development is opposed by the anthropologist to the "patterns of unintentional coordination" (Tsing 2015, 22), the multiple rhythm produced by other forms of gardening, like the one carried on by indigenous people in the forest of Borneo. In a similar way, the lives of feral cattle were very different from the ones of the cows in kilometre 11, since they became attuned to the collective of beings – the ecology of selves (Kohn 2013) – that formed the patches of forest – the "polyphonic assemblage" (Tsing 2015, 24) – still existing in between the logging centres and the estancias.

For almost one hundred years, until approximately the 1990s, when feral cattle probably disappeared from the area, two big categories of cattle inhabited the Casado territory: the 'racially improved' ones that were living in the estancias, and the creole ones living in the bush (*monte*), that were not branded neither officially owned by anyone (although the company did claim some kind of legitimate ownership over them). This second category of cattle are called in Guarani *sagua'a*, a term of uncertain etymology maybe resulting from the

transformation of the parallel term *bagual*, still used with the same purpose in Argentina and Brazil. This clear division between 'free' and 'controlled' cattle structured the imaginative horizon of people living and working in the area, in a way that went in many ways beyond the cattle domestication domain. According to Süsskind for instance, who writes about a neighbouring region, "the opposition between feral (*bagual*) and tame, as in many other parts of rural Brazil, seems to make more sense in the case of Pantanal than that between wild and domestic" (Süsskind 2016, 41). The concept of ferality has been lately theorised to account for contemporary ecologies which are the result of complex human and other-than-human interactions. Feral entities are such "because they emerge within human-sponsored projects but are not in human control".² In this article, we will propose to maintain a critical distinction between '*sagua'a*' and 'feral cattle', describing *sagua'a* as the result of contingent historical lineages that complexify the notion of ferality by grounding it in a specific context.

3 The Age of *Sagua'a* (in the Casado Territory)

Because most of Casado's cattle became *sagua'a* and roamed freely in the bush, often for several generations, the company organised teams of specialised workers in charge of capturing and bringing them to the slaughterhouse. Hunting *sagua'a* was a difficult job, and people would sometimes get wounded or even die. The teams were usually formed by a non-indigenous foreman (the *capataz*), and a group of about ten indigenous workers. Unlike the urban space of the factory, where indigenous and non-indigenous workers would never come across one another, the indigenous *sagualeros* worked in close collaboration with their non-indigenous *capataz*. This form of cultural intimacy gave rise to unusual contaminations, such as non-indigenous foremen learning local indigenous languages and undergoing shamanic healing rituals in case of bad health conditions. On their part, indigenous people sometimes played with their 'exoticism' threatening their bosses with death by shamanism or teaching them how to interact with spirits that didn't belong to their cosmology. As a non-indigenous foreman, Salvador Fretes, once told me that the Maskoy indigenous workers taught him how to be able to see a *pombero* - a spirit belonging to the Guarani cosmology - by covering his forehead with a scarf so that the *pombero* would not be able to see the cross that invisibly marked all baptised people. This game of mir-

² <https://feralatlas.supdigital.org/?cd=true&rr=true&cdex=true&text=introduction-to-feral-atlas&ttype=essay>.

rors is quite evident if we think that Maskoy workers did not believe in the existence of the *pombero*, which was rather a character of the Guarani cosmology adopted in Paraguay by the rural population. By spending days and nights trying to hunt *sagua'a* down, the *sagualeros* learnt to observe their habits and desires.

They [*sagua'a*] are scared of human beings. And the bulls circle the herd so that the lion does not attack. They have an anti-predator scheme, and they are stressed out like any other deer. And when it's time of draught – and draught is terrible there – they resist in the bush thanks to an underground fruit which retains water, and the cows can smell it. It's called in Guarani *yvy'a* (fruit of the ground). They drink from it. And also the cardoon, they step on it and suckle from it. [...] It is clear when the food is scarce in the bush because of their faeces. They eat the leaves that fell on the ground, dry leaves, and the cows' faeces are not green anymore but they are reddish. That's a sign that they have nothing to eat in the bush. (Del Río, Edoardo. Mayordomo para Montes y Estancias san José. Asunción, 15 de enero de 2016)

Sagua'a listen to bird calls, and birds warn them about the proximity of humans, so that *sagua'a* can run away. I'm sure they have a spectacular olfaction, because they are constantly on alert about the presence of animals that could attack them. But they are beautiful, and they have shiny fur. (Bauzá, Justo Fernández. Comerciante. Gobernador. Puerto Casado, 26 de febrero de 2016)

The method that *sagualeros* used to catch the animals consisted in fencing a portion of the water reservoirs where cattle usually drank at night, waiting for the small herd to be in, identifying the bull and tethering him (*tambear*) to a tree by the horns, thereby stunning him through the endurance of pain. Once the leading animal was dazed enough, they tied him to a *señuelo* – a hyper-domesticated, often castrated ox – that was trained since a young age to follow human orders. The task of the *señuelo* was to pull the *sagua'a* – which was tethered to him with a rope – by the horns, and lead him to the slaughterhouse. In the North American context, these bulls leading their peers to the slaughterhouse are sometimes called 'Judas' cow'. Because they refused to adapt to life in the ranches, the company never tried to lead *sagua'a* back to the estancia and re-domesticate them. Instead, the animals were captured through violent methods and brought directly to the Paraguay river, where a cargo-boat would be waiting for them in order to bring them to one of the slaughter houses located downriver.

Violent behaviours towards cattle were in general tolerated and only sporadically judged by the most 'literate' people as a sign of

roughness and lack of education, but violence towards the *sagua'a* in particular was deemed legitimate because of their status of 'wild' animals. The company workers would spend their festive days hunting them down in the bush, caching them with a lasso, and when the company - in the 1960s - needed to get the *sagua'a* out of the forest in order to count them, the managers didn't hesitate to shoot firecrackers into the bush to create panic amongst all the animals and push them out "crying" (Arce, personal communication) into the open fields. If it's true that *sagua'a* were freed from human control, the "time of the *sagua'a*" was a time of physical violence and confrontations, marked by the violence that regularly took place over the weekends in the logging centres, where people could be stabbed to death after a night of heavy drinking. Both categories of cattle, the improved races nursed in kilometre 11 and the *sagua'a* brutally captured in the bush, would at some point in their life be transformed in beef and become objects of exchange and desire.

4 Consuming Beef

The use of the word 'meat' - or even more specifically 'beef' - in order to mean the flesh of the cattle has been interpreted as a move to invisibilise the animal's personhood and reduce it to a mere object of consumption. According to Marek Muller, that particular kind of meat which is the flesh of domestic animals - cattle, pigs, chickens - has acquired in our society the status of safe, civilised food, and has been juxtaposed to the meat of wild animals, considered dangerous and potentially infectious. The author calls this ideology "carnistic colonialism" (Muller 2021). In a similar way, eating 'beef' in the Casado territory became a way of getting civilised. In a personal testimony gathered in 2016 in Puerto Casado, Juan Benitez recalled his decision to get married, leave his job as *hachero* (lumberjack) in a logging centre and move to Puerto Casado as a pivotal moment in his life:

My wife made me and my children into people. She tamed me and brought me here [to live in Puerto Casado]. We had two children and I decided to stay. I collected woods from the bush, I killed armadillos, I collected honey and I sold it to the factory workers, or I gave it to them in exchange for beef and rice. That's why I'm telling you that she made a Christian out of me (Benítez González, Juan. Estanciero. Puerto Casado, 28 de abril de 2016).

The consumption of beef, in the words of Juan Benitez, has a transformative effect. In particular, just like the possession of non-human animals transforms humans into owners, in Benitez' view beef has the power to transform humans that live in harsh and semi-wild con-

ditions into people. Like rice (and pasta), beef retains and transmits the power of colonisation-turned-into civilisation. A similar process of bodily transformation is described by indigenous people, who often underline – with a negative undertone – how they “didn’t know how” to eat rice, pasta and especially beef before the arrival of colonisation.

The amount of cows slaughtered per week by the company is often used by the ex-workers as an index of prosperity, and the number of times per week when they ate beef served a similar function. Maskoy people, in particular, sometimes differentiate good from bad Paraguayan bosses on the basis of how much and what kind of beef they received from them. Good Paraguayans would share with them primal cuts, while the bad ones only gave them entrails or meat coming from cows that died because of illness. Nostalgic memories of past are often accompanied by comments on how Casado would give them a heifer to eat when they organised an initiation ritual, or on how Casado gave cattle to powerful shamans because of their healing powers. This is the case, for example, of the Cacique Michi, a famous Maskoy shaman who lived with his wife in proximity of kilometre 40 of the railway track. According to some, Michi already possessed cattle before the arrival of Casado to the Chaco, and the company took the cows away from him because they didn’t want anyone else to own animals besides the company itself. According to others, because of his healing powers, Michi was the only person allowed to possess cattle in the Casado territory. In one way or another, possessing cattle was the ultimate symbol of power, and possessing big quantities of cattle was a clear sign of political power. Cattle ranches themselves absorbed this power as symbols of economic prosperity. When the Maskoy, after a long struggle for land in the 1980s, finally obtained a territory of 30,000 hectares from the Carlos Casado company, they founded most of their communities in the premises of Casado’s estancias, usually keeping the name that the company had previously given them (Machete Vania, kilometre 39, kilometre 40, Casilda).

Different types of human actors accumulated political power by trading cattle in the Chaco. Fernando Bauzà, an ex-governor of Alto Paraguay and ex-cattle dealer (like many of the political figures of Casado), explained to me how he used to buy cattle in the north of the region and then accompany them 400 kilometres south, all the way to Robert Eaton’s ranch, in order to sell them. Along the way, the group of 7-8 cowboys was welcomed with enthusiasm by the inhabitants (indigenous and non-indigenous) of the settlements where it spent the night, and with whom it would share the meat of a cow that had been killed on purpose for the occasion. As Villagra emphasises when talking about indigenous perceptions of cattle, cows were the best animal in a sharing economy because of their size, and because of the vast number of alliances and exchanges they facilitated (Villagra 2010). Cattle dealers such as Bauzà relied on the body of cattle

and the sharing economy it allowed in order to accumulate political power, and used it to acquire a political office once they decided to stop the business and settle down in the region. It is not by chance that nearly all contemporary politicians in Puerto Casado were also butchery owners.

5 The Mennonite Colonies

A black irregular stain on a green background – this is how the area centred in Filadelfia, capital of Boquerón Department in the Gran Chaco of western Paraguay, appears on the satellite images elaborated by Hansen et alii to track environmental hotspots worldwide (Hansen et al. 2013). Driven by the expansion of cattle industry, the dry forest once typical of the Central Chaco has been increasingly substituted by extended pastures (Baumann et al. 2017). The main driver of deforestation has been the activity of a group of Mennonites, who arrived in the Chaco at different waves starting from 1919.

“Pacifist Christians who for generations had farmed the rich grain lands” in Germany, Russia, Canada (Goossen 2017, 16), Mennonites belong to an Anabaptist sect born out of the Protestant Reform in Friesland in the XVI century. Over the centuries, persecuted both by Catholics and Protestants, they sought refuge in Russia, North America and, at last, in South America. Their encounter with the Paraguayan Chaco can arbitrarily begin on 4 October 1919, when the business magazine *The Economist* publishes a comment on Paraguay in its *Latin American Notes*. Together with the usual accounts on Stock Exchange Indexes and capital markets – low interest rates; “credit extremely plentiful”; Italian lira depreciating – the magazine reports on investment opportunities in the cattle industry. Just like Argentina, but second to no other South American country, Paraguay would offer unquestionable advantages, “so far as climate, water, and labour are concerned”. The superior qualities of the herbage, and the comparative freedom from insect pests, had made the first investments in cattle industry promising. From 200,000 heads of cattle in 1877, in 1915 there were more than 5,000,000, making Paraguay the 6th cattle-rearing country in the world (after US, Brazil, Argentina, Australia, Uruguay). Writing a few years later in German – the language of Mennonites – Adolf Schuster, the Swiss consul in Paraguay, confirms the bulk of the *Economist* editorial, but qualifies some details. Not all cows are equal under the measure of meat. Descendant from those imported by the Spanish in 1556, Paraguayan cows are “more bones than meat”, half the weight of Argentinian ones (250 kg against 600 kg). And yet, continues Schuster, Paraguayan cattle are immune to *Tristeza*, the sleeping sickness, which kills most of the imported breed cattle (Schuster cited in Friesen 2013, 43).

Indeed, at the beginning of the twentieth century, the devastation left by the Triple Alliance war and the prospect of a *negocio pingue* attracted a strange mixture of adventurers, entrepreneurs, and criminals – sometimes combined in a single person. With very little investment, almost no need of technology and workforce, cattle ranching in the Chaco could ensure returns well above 15% – with the yield of Treasury bills being well below 5% (Kleinpenning 2009). According to Theodore Roosevelt, who visited him in 1914, George Lewis ‘Tex’ Rickard, for example, started cattle ranching in the Chaco with 468,000 acres of land and 35,000 heads of cattle after a career as a gold digger in Alaska. Initially helped by Texan cowboys, he later resorted to the cheaper local workforce. Or take George West Musgrave, whose legend is still alive among Mennonites. After having worked for Rickard, he started a sort of business to steal cattle and falsify their marks, thus gaining a fame as Gringo rustler (Friesen 2013).

Among these legends of luxurious ranches, the story of the black stain and the Mennonites unfolds. In the 1910s, following the enforcement in Canada of new education laws, which standardised English as the only teaching language, Canadian Mennonites were planning to emigrate to South America, attracted by the prospect to run there their own schools in German without state interference. To this end, they contacted and met in New York Samuel McRoberts, a “well-to-do and well-connected financier” who had strong ties with the Paraguayan government and business. Through a complex deal, the banker intermediated the sale of the valuable Canadian farms in exchange of vast pieces of land in Central Chaco from the Casado family (Loewen 2013, 34 ff.). This first deal with the Canadian Mennonites was soon followed by the sale of more Chaco land to a few thousands Russian Mennonites, who were escaping the Soviet collectivisation campaign. Crucially, this second deal was made possible by a credit obtained by the Mennonite Central Committee (MCC), a North America-based organisation committed to help and sustain Mennonites groups worldwide.

6 The Age of *Sagua'a* (in the Mennonite Colonies)

While the deal turned out to be extremely lucrative for both Casado and McRoberts (Fretz 1953; Klassen 2001), the first encounter between Mennonites and Central Chaco did not “take hold”, and colonisation, as the “becoming-necessary” of aleatory encounters, was not an “accomplished fact” (Althusser 2006). With prolonged droughts, tropical diseases, and lost crops plaguing the colons, discourses of leaving the Chaco gained momentum. Yet, their debts enchain them to their farms, and only few of them had the financial resources to

undertake the return trip. One of us met one of these few, an old man we call here Helmuth, who was born in the Chaco but moved to Germany as a boy in the mid 1950s.

I met Helmuth in Asunción, at the Mennonite Guest House. He is having breakfast with his wife and he wants to talk. Judging from their backpacks, probably bought in Germany, they look like tourists. He tells proudly that he was born in Neuland, in the Chaco, and that he spent his early childhood there. The conditions were harsh: the parents had tried some crops without success – cotton, sesame, more. His father, a Russian Mennonite, was wounded while fighting for the Nazi army in Russia, and was no longer able to work: they needed help, but the natives (“Indianer”) – the only available workforce – were too unreliable.

Rather than mythical images of ranches like the one Richard King founded in 1859 in Texas, still among the biggest in the world with its tenths of thousands of heads of its own brand (Sizer 1999) we need to imagine small, poor villages engaged in subsistence agriculture, plagued by diseases and food insecurity. The few livestock were managed collectively and raised open-range. Left free to graze for entire seasons, cows often went wild (Fretz 1953; Loewen 2013), becoming *sagua'a*.

Contrary to the celebratory article on *The Economist*, water scarcity, the absence of suitable pasture and the lack of proper technologies, made impossible to scale up cattle ranching in Central Chaco. Reports of lucrative wheat farming and cattle ranching referred in fact to the wet tropical areas next to the Rio Paraguay. When applied to the inner, drier zones they were at best misleading. Where Casado promised “a veritable utopia”, “absence of any winter”, “plentiful and nutritious manioc plant” (Loewen 2013), the Mennonites, hit by diseases, exposed to temperatures ranging between above 40°C in summer, and below 0°C in winter, found themselves struggling for survival. As the average annual rainfall decreases moving westwards from the Rio Paraguay, the area of the Mennonite Colonies is usually classified as a transition zone between a ‘semi-humid’ and a ‘semi-arid’ area (Rohmeder, Wilhelmy 1963; see also Métraux 1946). Even for human consumption fresh water is scarce, and locating the wells required indigenous guidance. A 1959 census classified water sources according to its quality: only 10% of the springs were suitable for human consumption (Hack 1961). Areas of dry forest (*monte* in Spanish, bush) alternate with open areas, called *campo*. These grasslands or savannahs, often dotted with the typical bottle trees, are not the consequence of anthropogenic fires, as initially geographers thought, rather the trace of prehistoric river beds (Rohmeder, Wilhelmy 1963; Hack 1961). An old map (Hack 1961), certainly drawn before 1948, accounts for the extension of these open fields relative to the bush, and allows a comparison with the mentioned image of a

black stain recently published (Hansen et al. 2013). With the bush always reconquering the *campo*, this landscape, however, was not static, as Lengua reports testify (Hack 1961).

Apparently ideal for farming and cattle ranching, these open areas were the obvious choice for a settlement, as they would avoid the tiresome manual deforestation of the surrounding bush. As one interlocutor stressed, in the old times deforestation had to be carried out with bare hands. But appearance is sometimes deceiving, and the tall, thick, grass, of the *campo* deceived indeed the first Mennonites (Klassen 2001). Instead of the ideal pastures, the luxurious *campo* in Central Chaco were all covered with "bitter grass" (Spanish *Espartilla*, Latin *Elionurus muticus*), that, in fact, cattle do not eat; only dairy cows sometimes eat its young leaves, and even in this case their milk tastes unpleasant (Klassen 2001). Perhaps understandably, the first expedition of Mennonites was misled not only by the Casado 22,500-head cattle ranch, which they visited, but also by the modern American-owned meat-packing plant nearby – "with cement walls, washed clean, beautifully in order" (Loewen 2013, 36).

Unsuitable pastures were not the only missing element for a successful colonisation of Central Chaco. As most of the water sources were too salty even for cows, intensive cattle ranching was excluded. Even today, water is the limiting factor for an intensification of farming and the landscape is characterised by *tajamares*, huge basins that store rainwater. Furthermore, before the introduction of barbed wire, fencing was also an issue, and the few cows strayed. In June 1929, a correspondent reported that "Johan F. Wiebe, whose ox wandered off some time ago, has searched almost the entire colony, but cannot find him", and that "Peter Kauenhoven of Weidenfeld recently was fortunate to have recovered his ox, which had wandered off about a year and a half ago; Mr. Casado noticed it in his herd and at once shipped it back to the Chaco by rail" (Loewen 2013, 64).

Those years, until the 1950s, are indeed the years of the *sagua'a*, and their legend is still retold by local bestsellers (Funk 2017). One of us first learned about them during a conversation with his guest, near Philadelphia, in 2017:

I'm in the car with Gerhard, driving back to Philadelphia from his estancia on the main road, not asphalted, full of holes due to recent rains. Two large trucks, with trailers, are parked on the side of the road. I notice the empty cages used to transport cows to their final destination. In the cab of the trailer, the two drivers look at us like someone who has nothing to do and is waiting. It's getting dark. The night before, explains Gerhard, a trailer overturned; the cows fled, taking refuge in the bush. What will happen? I ask. They will hide, he answers, the bush is large, it will not be not easy to catch them. We stop for a moment. Gerhard

speaks Spanish with the ‘Indians’. But what happens to the cows, I ask again. We will take them, he replies, there is no longer room for wild cows here. We drive again. After a few meters Gerhard abruptly brakes: a cow runs across the road and jumps – surprisingly agile – into the bush.

But in the old times, so the Mennonite stories go, there were a lot of *sagua'a* hiding in the bush. Just with the *lasso*, one *estanciero* and his two helpers would capture in ten years more than 2,000 of them – while trapping a few hundreds more. Bounties were offered, and hunting trips were organised, often ending with a duel between the man and the animal. Appropriating somehow their strategies of resistance, such stories exceed the dichotomy between wild and tamed animals³ and describe *sagua'a* as wiser than wild animals, exactly because of their intimate relation with humans. Almost mythical, they were endowed with exceptional characteristics like giant horns, the ability to jump like jaguars, and extraordinary sensory capabilities. But, above all, these stories underscore their stubborn recalcitrance to be dominated by men, with duels between *sagualeiro* and *sagua'a* often enduring over years. This obstinate tendency to mutiny is still recalled by Mennonites when they address restless children with a “You are a wild *sagua'a*!”

Ruben Funk tells the story of *sagua'a* Hoco, a bull castrated when he was two years old and escaped during a Rodeo:

It often happened that young cattle ran wild. Cowboys found that these ‘tame’ cattle, when they become wild, behave much ‘wiser’ than animals born in the wild. As they know how human think, they are very careful whenever they leave the bush. One of these wild oxen had already become a phenomenon. He was known as ‘Hoco’ [...]. On one occasion a group of men went on a *hunting trip* to this salt lagoon area. One of the men [...] suddenly sees huge cattle tracks and dung. Everything still fresh. [...] There.... there lies a big, colourful ox with giant horns. He has his eyes closed and is chewing. The man stands still for long moments contemplating his deep-rimmed horns. He estimates the length of the horns at 1.30 metre. They are pointed and bent forward. He stands behind a tree, aims his gun, a calibre 22, at one of the horns and pulls the trigger. *The ox jumps up like a jaguar, snorts, and comes right at him.* [...] “The old Hoco is still alive” (Funk 2017, 63-7; Authors’ transl.; emphasis added)

He also recalls how Mennonites used *tamajares* to attract *sagua'a* during periods of drought and catch them:

³ See for example Descola 2013, 53.

The cattle strayed in distant pastures. These cattle became feral so easily that it became impossible to take care of them and herd them together. They bred in the wild steppe, so there were already *several generations of cattle that had never been corralloed or lassoed*. They had neither the 'ear cut' nor a brand. Such a wild cattle is called *Sagua-á*, or as the Argentines and Brazilians say: "Banguelada". [...] Forest clearing had already begun and part of the estancia had been already fenced. Larger tajamares were also dug in these forest-free areas - water reserves for times of drought. This drought gave the opportunity to capture these herds of wild cattle [by attracting them with the tajamares]. In the steppes outside the fences only a few pools remained that still had water. The administration had given the order to capture these *Sagua'a* herds... *Sagua'a* lassoes from around the area were recruited, paying them a bounty on each *Sagua'a* caught. (Funk 2017, 130; Authors' transl.; emphasis added)

A linguist also classify *sagua'a* as one of the few guarani words imported in Plattdeutsch, the German dialect Mennonites speak:

The word *sagua'a* ('wild') was only known for a wild, ownerless cattle, of which there were plenty in earlier times. Today one says to a Zappelphilipp [fidgety child]: "Dü best en willa *sagua'a*". (Thiesen 2007, 70)

This is a world then where *sagua'a* escape the grip of human control and remain mostly illegible to their human hunters. Like James Scott's (1998) nomad populations, they don't live in the "striated", or gridded, space humans were striving to impose them, but rather in the "smooth", amorphous space in-between (Deleuze, Guattari 1987, 474). One early power dispositif that inserts cattle (Deleuze 2018) into an element of a grid is the practice of branding. This is mentioned for the first time in 1940 in the records of the central Mennonite administration. According to this 'Protocol', each colon was forced to brand his cows with the mark CM (Colonia Menno) and the sale of unbranded cows was forbidden (Funk 2017, 38). As it emerges in a discussion with an interlocutor, rituals of branding set in motion the accounting machine of the estancia (see Strathern 2003), they capture the cow into the organised world of administrative records and prepare it for the market. Interestingly, in these legends the fact that a cow could be unbranded, without even an ear-cut, is often mentioned together with other abnormal characteristics like monstrous horns, as if both were spectacular monstrosities.

7 Ox Dollars, Debts and Machines

Since the 1950s, a number of factors converged to solve the existential crisis of the Mennonite colonies, leading to a revolution in their mode of production. Driven by the financial and technological help of North American Mennonites, this territory is inserted into the global economy through the introduction of new biological species, technologies, and foreign capitals. The always changing alternation between *campo* and *monte* gives increasingly way to the emergence of the black stain. The bush, and their inhabitants like the *sagua'a*, are more and more substituted by pastures.

Mostly financed by the MCC, US equipment began to arrive in Central Chaco. American from Minnesota, son of Russian Mennonites, Harry Harder introduced the first bulldozer to the colonies in 1953. "A successful farmer, who worked with the largest and most powerful machinery of the time", he opened with his TD7-Bulldozer new roads and began to deforest the areas around the colonies (Stoesz, Ratzlaff n.d.). The iconic arrival of Harder's Caterpillar, celebrated on the local newspaper, was soon followed by an electricity generator, tractors, dairy machinery, and other machines.

Mechanical equipment came together with new species and the north American biological know-how. Funded again by the MCC, and initially run by North American Mennonites (Ratzlaff n.d.), the Fernheim Agricultural Experimentation Station (Landwirtschaftliche Versuchsstation Fernheim) dates back to 1946 (Ratzlaff n.d.). A key element of the agricultural success of the colonies, it was responsible for the introduction of the Büffelgrass (*Cenchrus ciliaris* L.), an herb of African origin, which spread in Chaco starting from the 1950s, "like a fire" (Goerzen 2003). Introduced in the Great Plains around the 1930s, this herb was kept in highly esteem. Resistant to drought, it was an excellent fodder for the increasingly genetically selected cattle. But capable as it is of quickly invading even non-target environments – the biological counterpart of the machinic Caterpillar TD7 – it is today a much-discussed species, as it causes dramatic losses of biodiversity. Perhaps an example of the fragility of mono-species plantations, increasingly attacked by various diseases, this grass has been recently replaced by another African species, with a curious Latin name: *Panicum Maximum* (Glatzle 2005; Marshall, Lewis, Ostendorf 2012).

While before the 1950s agricultural products could only be traded through the narrow-gauge railroad run by the Casado Company, and even so, only after a days-long travel with oxen-drawn wagons; the opening of the Ruta Transchaco in 1961, which connects the Mennonite colonies with the capital Asunción, provided the infrastructure needed to reach the global market.

Other than infrastructure, mechanical and biological technologies, finance did also its part to reshape this world. Credits obtained

from North America and, increasingly, from the central Paraguayan government begun to flow into the colonies and to be redistributed among Mennonites, to foster investments in the cattle industry. In a movement which fully reflects the underlying practices of financialisation of nature, these credits were denominated in a local fictitious currency, the ox-dollar, still partially in use in the colonies. Just as old currencies (such as the dollar and the lira) were tightly anchored to gold and stabilised, linking debts to the price of an ox avoided risks due to the volatility of the price of the meat, as cattle production was becoming the main source of income for Mennonites. Initially used only for the debts contracted by the farmers, its use as main currency to be used for all transactions spread out. So, for example an interlocutor's old refrigerator would cost 9 Ox \$ and his used car 22 Ox \$. It is done, he explains, to help young people, to protect them from the external market. And yet, these credits, granted in proportion to the market value of the land, are one of the main mechanisms by which farmers and cows are introduced into the dynamics of the capitalist markets.

By juxtaposing cows and dollar in the same signifier, and by linking it to imaginaries of debts and profits, the ox-dollar performed in fact a further commodification of the cows. A comparison between an imaginary '*sagua'a*-dollar' and the ox-dollar might help to explore this point. While some Mennonite stories on the *sagua'a* point to the fact that they were indeed priced and hunted to be traded, often with the Paraguayan military in the North (Funk 2017), a currency '*sagua'a*-dollar' to hedge inflation risks is hardly thinkable because of its structural instability (or volatility as financial practitioners would have it). Although sometimes objects of exchange, and indeed objects of priced competitions, *sagua'a* were born neither as commodities nor as assets, while contemporary cows are undergoing a process of both commodification and assetisation. They were not commodities, because they were possessed after a successful duel, and often named, as the old legends clearly show. At best, bounties were offered on them. They were not commodities, because they were possessed after a successful duel, and often named, as the old legends clearly show. At best, bounties were offered on them. In that *sagua'a* were intimately connected to their hunters through a web of diverse relations, they entered these exchanges in the form of persons, and not as fungible 'things' disentangled from any previous context.⁴ Thus,

⁴ As Strathern, building on Chris Gregory, puts it: "if in a commodity economy things and persons assume the social form of things, then in a gift economy they assume the social form of person" (Strathern 1988, 134). Building on James Carrier, we take 'possession' here to signify "a relationship of identity between person and object" and "the object in such a relationship". Its opposite is a commodity, "which is alienated, seen as separated from the people associated with it" (Carrier 2005, 9).

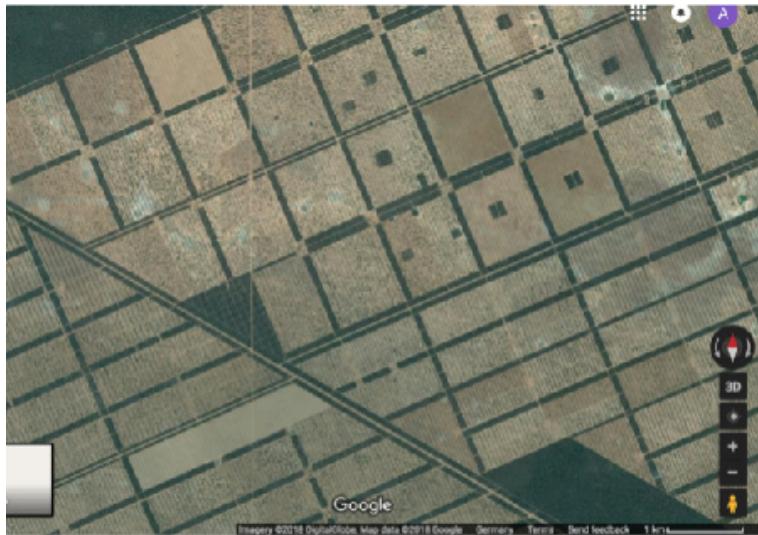


Figure 2 Satellite image. Green stripes protect from the wind. Source: Google (public domain)

even when their meat was sold on the market, the transformation of a *sagua'a* into a commodity was dependent on the successful unfolding of unpredictable events, and never foregone. And they were not assets, as they could not provide any capital return in time, contrary to the Ox-dollar. Indeed, the transition from the impossibility of a '*sagua'a*-dollar' to the very reality of the ox-dollar signals the transformation of the relations of production whereby new kinds of beings are performed, produced, and reproduced [fig. 2].

8 The Grid

Through the complex entanglement of debts and profits, capital accumulation will fuel from now on an ethos which regards Nature as something to conquer, defy and exploit. In 1956 on the local newspaper *Mennoblatt*, a teacher cries (see also Goerzen 2003):

We are bothered by the bush, we need to make room. With the first rains of spring, we need machines to plant much more. Not 10, not 50 but 100 hectares we have to plow. (*Mennoblatt*, 5 May 1956; Authors' transl.)

But increased deforestation and the substitution of native species soon prompted ecological problems. In 1968, a piece on the *Mennoblatt*

blatt openly warned that the ecological catastrophe then plaguing the south of Argentina was also threatening the Paraguayan Chaco. During periods of drought and high wind, and without the protection of the bush, the soil, the writer warns, “the solid earth”, was becoming “a toy of the wind” (*Mennoblatt*, 16 August 1968). Just as in the dramatic events that caused that catastrophe known as the Dust Bowl (Worster 1979; see also Steinbeck’s *The Grapes of Wrath*) which hit the Great Plains in the 1930s. Still in 2017, Helmuth recalls without hesitation his experience of fear as he witnessed as a boy such events. He talks about the great dust storms that sometimes plagued his house and limited the view to a few metres. His parents kept telling him that all was normal, but he never believed it. And cows also suffered under these events, as the same article in the *Mennoblatt* recalls. During these droughts, lack of hay and water caused the death or the premature slaughtering of many of them (Goerzen 2003; *Mennoblatt*, 16 August 1968).

A Mennonite forest engineer, also talked with us about these events, which became critical when bulldozer began to clear large areas – in the 1950s and 1960s, when Helmuth was a child. The practice of providing protective strips of forest against the wind and plowing fields orthogonal to the wind direction would be advised by UN staff visiting the colonies. These recommendations were taken seriously by the Mennonite administration. Already in 1971 an internal regulation prescribed a protective strip every 500 meters; two years before this practice was regulated by law by the Paraguayan state. Credits to the colons were linked to the compliance to this regulation. This version of the story, apart from the intervention of UN technicians, was also confirmed by Gerhard, who often stressed in our chats the ecological responsibility of the Mennonites. They understood for themselves that there was a need for protective strips: further laws were useless.

It is therefore in this way that the landscape of Chaco is taking on post-apocalyptic traits, reminiscent of the opening scenes of Blade Runner 2049. The striated, squared, grid-like, satellite images we see via Google Earth (see [fig. 2]) are in fact performed by the forest law No. 422 (promulgated in 1973, still in force) which regulates deforestation and imposes protective strips and the maintenance of certain amount of bush. Furthermore, justified and exploited in the name of ‘sustainability’, processes through which “money leverages nature to produce more money” (Ouma, Johnson, Bigger 2018, 500) are now inserting cows and cattle ranching into the financialised world of ‘sustainable finance’, signalling an intensification of practices of commodification. In this process, ecological discourses, by now hegemonic, seem to provide the legitimising ground for a whole new set of tools of social/environmental control. For example, beyond their established role as fungible commodities in the global

meat market, cows are now even participating in carbon markets.⁵ Here, the enteric ‘emissions’ produced by their digestion – rich in methane, a greenhouse gas – are measured, assessed and quantified to be made commensurable and tradable with other industrial CO₂ emissions (S&P 2021; see MacKenzie 2009). Pricing these emissions would thus allow the market to efficiently evaluate environmental costs, and limit climate change. Along similar lines, new financial instruments like ‘sustainable bonds’ seem to be turbocharging commodification by leveraging on the latest technologies. Whereas the ox-dollar, as we pointed out, performed commodification through relatively simple (analogue?) operations of disentanglement (branding, accounting etc.), these operations now fully rely on digital technologies. As a case in point, the meat giant JBS recently issued a ‘sustainability-linked bond’ whose interest paid to investors are pegged to the deployment of a transparent supply chain, one which would discard meat produced through illegal deforestation. As a result of the effort of tracing meat products to their producers, the primitive act of branding gets now digitalised into a QR code – a digital name only computers can read – and old accounting registers evolve into the latest version of a blockchain platform,⁶ called Transparent Livestock Farming Platform, which “extend socioenvironmental monitoring with security of the data, reliability and producer engagement”.⁷ As a result, the mesh of the gridded (or striated) space gets narrower and narrower.

9 Conclusions

As we have shown, in the twentieth century the Paraguayan Chaco has been the theatre of a series of multiple aleatory encounters between humans and non-humans, some of which precariously stabilised into distinct yet interconnected and interdependent worlds. In particular, we highlighted a historical transition from what we called “the age of *sagua'a*” and “the age of the grid”. This transition is not only a temporal, but also an ontological one: it is characterised by the disappearance of certain beings and of the assemblages they were part of, and by the birth of new ones (cf. Blaser 2018).

The beginning of the age of *sagua'a* can be placed at the very beginning of colonisation, when the first herds of cattle started to adapt – and to be modified in their bodies and genetic heritage – to

⁵ Carbon markets seek to limit climate change by pricing greenhouse emissions.

⁶ Blockchain platforms are essentially digital systems designed to record information transparently and reliably.

⁷ <https://jbs360.com.br/en/transparent-livestock-farming>.

Latin American ecologies. Some of them (called *bagual*, *sagua'a*, *chimarrones*) became part of new collectives of being, where humans only had a peripheral role. According to Darwin, these creole cattle were visibly present in Paraguay up to the nineteenth century, where they would "swarm southward and northward in a feral state" (Darwin 1988, 58). For instance, while cattle ranching played a minor role in the Mennonite Colonies in the 20th century, in the Casado Territory it represented since the beginning a complementary activity to the production of tannin. In this phase, *sagua'a* and their life-world existed at the intersection between the Mennonites Colonies, the Casado Territory, and their economies.

In Puerto Casado, special teams of *sagua'a* hunters were organised by the Casado company. Hidden in the bush that extended in between the Casado territory and the Mennonite colonies, *sagua'a* co-habited with jaguars and other animals - like the *urutau*, a bird that would warn them when enemies were approaching - they learnt to find water in an arid landscape and to forage at night when their human predators were supposed not to be around. Radically different from the cows bred and governed in kilometre 11, too fat or too slow to escape from the estancias that produced them, *sagua'a* were agile beings, ready to fight against humans and to refuse their status of domesticated animals. Nevertheless, while *sagua'a* were treated like hunting trophies and highly de-humanised through the legitimisation of purpose-free violence, 'improved' cattle entertained a personal relationship with the humans that governed them.

As it emerges from memoirs of Mennonite colonisers, hunters engaged *sagua'a* in duels which often span over years. Mennonites devised ingenious traps to attract and capture *sagua'a*, but these proved unpredictable and not less resourceful, giving their adversaries hard time. Around campfires, stories about these battles were told and retold, and *sagua'a* like the old Hoco often assumed mythical characteristics. Killing one of them fulfilled the dream of each Mennonite cowboy, making them proud. Commercial motives were present, but often to the side. As in Anna Tsing's (2015) *matsutake* hunts, these fights indeed confronted persons: *sagua'a* hunters were not alienated labourers, nor were *sagua'a* born as commodities.

In the age of the grid, a whole new world emerges. Through practices of branding and accounting, cows are dissociated or alienated from their life-world (see Callon 1998). Enclosed in estancias surrounded by barbed wire, they cannot escape. They have neither histories nor names. "Purified" through operations of assessment (Tsing 2013), they are increasingly performed as financial assets. As the fictitious local currency - the ox-dollar - iconically demonstrates, they are used to guarantee farmers' investments and to produce new profits, thus becoming the pivotal point around which capital accumulation revolves.

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Correspondences for the Forest of Fiemme Multispecies Relations in the Aftermath of Vaia Disaster

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Abstract This paper explores the multispecies relations that characterise a specific temporal conjuncture of the Fiemme Valley: the aftermath of Vaia, a storm that crossed Italy in 2018 and whose repercussions continue to affect this Alpine territory. The Vaia disaster resulted from the cultural remodelling of two landscapes: the forest one, implemented on a local scale through silvicultural practices; the atmospheric one, implemented on a global scale with the emission of greenhouse gases. I aim to demonstrate that the emergence of a new landscape through encounters between multiple forms of life and agencies is irreducible to the anthropocentric perspective.

Keywords Vaia storm. Multispecies relation. Fiemme valley. Temporal conjuncture. Non-human correspondences.

Summary 1 Introduction. – 2 In the forest of relations. – 3 Conclusion.



Peer review

Submitted 2022-03-07
Accepted 2022-07-11
Published 2022-07-27

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Citation Martellozzo, N. (2022). "Correspondences for the Forest of Fiemme. Multispecies Relations in the Aftermath of Vaia Disaster". *Lagoonscapes*, 2(1), 145-162.

DOI [10.30687/LGSP/2785-2709/2022/01/007](https://doi.org/10.30687/LGSP/2785-2709/2022/01/007)

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1 Introduction

Forests and mountain regions are irreplaceable laboratories for studying climate change (Baudo, Tartari, Vuillermoz 2007). They occupy a growing body of environmental research thanks to their critical role in the functioning of the geosphere: mountains are hot spots of biodiversity, supply 30-40 per cent of the Earth's freshwater and contain the primary terrestrial resources of carbon; furthermore, forests represent ecological buffers, capable of stabilising regional weather patterns (Moran, Ostrom 2005). Since the first conference on endangered atmosphere organised by Margaret Mead in 1975 (Mead, Kellogg 1980), anthropologists have been increasingly involved in climate research.¹ They are

strategically well-placed to interpret, facilitate, translate, communicate, advocate, and act both in the field and at home in response to the cultural implications of unprecedented climate change. (Crate 2008, 571)

In this regard, ethnographic researches in mountain contexts are particularly significant. For example, starting from his fieldwork in Swiss mountain areas, Krauß pointed out the need to reconfigure our relations with the environment. He defines Alpine pastures "as an assemblage of people and things, of human and non-human actors" (Krauß 2018, 2).

This short essay explores the multispecies relations that characterise a specific *temporal conjuncture*² of the Fiemme Valley: the aftermath of Vaia, an extra-tropical cyclone that crossed Italy in 2018 and whose repercussions continue to affect the valley. First, I give a short presentation of the Vaia disaster, considering its deep entanglement with the history of the Fiemme valley. Then, I consider the different intentionality of three non-human actors: trees, mushrooms and insects. Each of these living beings is presented through the lens of a human interpretation of Vaia, which nevertheless cannot wholly overlap their species-specific subjectivity. Finally, I discuss the emergence of a new landscape through encounters between multiple life forms and agencies, which I call *correspondences*. According to Ingold, they describe the ways "along which lives, in their perpetual

¹ Crate, Nuttall 2009; Hastrup 2013; Barnes et al. 2013; Elixäuser, Bösch, Vogel 2018; O'Reilly et al. 2020.

² I preferred the term 'conjunction' instead of 'frame' because of the particular *heterochrony* underlying the Vaia disaster. Ssorin-Chaikov, referring to Foucault's work, defines heterochrony as "a crossing point of several temporal disjunctions that are constituted as a relation to temporalities that extend beyond the scope and the terms of this site" (Ssorin-Chaikov 2006, 356), and which, in my opinion, are not reducible to human agency alone.

unfolding or becoming, simultaneously join together and differentiate themselves, one from another" (Ingold 2021, 9). In this paper, I focus on the several unexpected (and unintentional) correspondences of the human and non-human agencies entangled in the Vaia disaster.

It is not a coincidence that Zanini and Viazza observe the gradual establishment within the Alpine anthropology of line of studies dedicated to environmental issues in the last ten years (Zanini, Viazza 2020, 23-5). The present research fits into this perspective, trying to merge the specific attention to the environment with a look towards multispecies ethnography. Almost three years after the start of the COVID-19 pandemic, it is now evident that men are inextricably linked to other non-human subjects and agencies, whether they want it or not (Keck 2020). The multispecies approach will likely become a fundamental tool to guide us in the tangle of these interrelations (Jensen, Morita 2013; Tsing 2015; Fabiano, Mangiameli 2019). The distinction between organism and environment, on which classical ecology was based, is now questioned by those scholars who point out the emergence of the Anthropocene as a distinct era marked by an unprecedented impact of human actions. Long-term repercussions of the actions of a *specific part* of humanity heavily affect the global climate. When faced with a heterogeneous and all-encompassing phenomenon such as climate change, anthropological knowledge can be crucial in mediating between times, scales and living beings. In other words, anthropology, and especially the multispecies perspective, can indicate new paths of coexistence within the Anthropocene. Nevertheless, Haraway teaches us (2016, 89-141) that coexistence goes beyond simple symbiosis: it determines a co-construction (or destruction) of the same environment, which she calls *sympoiesis*.³

Indeed, "can there be any better example of conviviality, of living and growing together, than the trees of a wood?". This is what Ingold asks himself in his recent essay on correspondences (Ingold 2021, 19). My research also starts from the same premise: considering the forest as a privileged place to study multispecies relationships. My fieldwork focuses on the interventions of woodland restoration and reforestation in the Fiemme valley. Despite the dramatic situation and restrictions in Italy from early 2020 due to the COVID-19 pandemic, it was possible to carry out almost nine months of ethnographic research.⁴ The experiences and events I refer to in this essay occurred during the third and fourth field periods. In addition to numerous in-

³ Even Latour, overcoming certain philosophical 'rigidities' of his ANT (Actor-Network Theory), observes that "organisms make their own environment, they do not adapt to it" (Latour 2017, 103).

⁴ The research comprehends four main periods (February-March 2020; September-November 2020; April-May 2021; September-October 2021), with other minors (for a total of 5 weeks) and preliminary fieldwork during September 2019.

terviews with local stakeholders, I closely observed ordinary and extraordinary wood management practices. Furthermore, to consider the centuries-old history of the Fiemme community, I spent several weeks working in municipal archives and the historical archive of the Magnificent Community of Fiemme.⁵

Already during the second year of research, I focused on the impact and repercussions of the Vaia storm. The particular intensity of this extreme atmospheric event in Fiemme was not accidental but the result of an unexpected and uncontrollable synchronisation of temporality⁶ positioned at the intersection of different spatial scales and human/non-human agency (Martellozzo 2021). The Vaia event represented a disastrous intertwining of capitalist-driven practices, whose long-term repercussions have 'resonated' with each other: on the one hand, there are the forest management policies inherited from the eighteenth century, which shaped a large part of the Fiemme forests (Corona 2019); on the other hand, anthropogenic emissions of carbon dioxide, capable of altering global atmospheric landscapes (*airscape*). Vaia, which crossed northern Italy in October 2018, was the first atmospheric phenomenon of this kind to affect the Italian Alps. With more than 1 million and 400 thousand m³ of wood, the Fiemme Valley is the most damaged Forest District in the Autonomous Province of Trento and one of the most devastated in all northern Italy (APT 2020). The storm acted as a "revelatory crisis" (Solway 1994), showing the unsustainability of a certain historical way of inhabiting the valley. Despite the relevant changes in forestry management since the Eighties, the woodlands of Fiemme turned out to be very vulnerable.

To understand this fragility, we must necessarily take into account the complex interrelations of agencies. The Fiemme Valley is a territory inhabited by a series of non-human actors, which properly environmental anthropology - and not merely ecological (Crate 2011) - has to include. In this regard, the Vaia event has shown all the difficulties in answering the crucial question: who inhabits the mountain? That is a complex question, both for the local community and the ethnographer, called for a continuous decentralisation of his gaze and method.⁷ As summarised by Viazzi and Zanini, the Alps

⁵ This medieval institution, still existing, is undoubtedly the principal forest owner of Fiemme valley; it manages an environmental heritage of approximately 20,000 ha, which comprehends 60% of the Fiemme woodlands. This heritage can be classified as a commons due to its historical and management features (Ostrom 1990; Moran, Ostrom 2005). The Magnificent Community of Fiemme has literally shaped the landscape of this valley through nine centuries of forest management.

⁶ Anna Tsing gives an alternative definition, talking about "forms of temporal coordination" (Tsing 2015, 131).

⁷ This decentralisation is also epistemological, insofar as anthropologists must necessarily take into account other distinct knowledge and disciplines. I am aware I have no

have become a place of unprecedented negotiations, which reveal very different, if not irreconcilable, positions within the Alpine communities and, perhaps to an even greater extent, among those who live in the mountains and those who instead look or think of the mountains from afar. (Zanini, Viazzo 2020, 24; transl. by the Author)

2 In the forest of relations

Non-human agencies are irreducible to the anthropocentric perspective; there is always a residual dimension that overlaps human explanations, both scientific and 'popular': it comprises the species-specific rhythms of trees, mushrooms, and bark beetles. As such, the following cases are not a commentary on the cultural ways in which non-human beings 'mean something' from the human perspective. It does not mean that we will adopt the points of view of the tree, of the mushrooms, or of the beetle, resorting to a perspectivism *à la* Viveiros de Castro (2014) or considering autonomous *umwelten* (however intersected) such as von Uexküll (Ingold 2000, 176-8). In the first case, the ontological multiplication is based on a unique epistemology and on a perspective that is ultimately human (all too human). In the second, the *umwelten* are juxtaposed with each other, *interacting*, but the continuous process of mutual modelling is not considered. Instead, we agree with Emanuele Coccia (2016) when he states that every point of view (*point de vue*) is also a point of life (*point de vie*): countless ways of life branch out and correspond in the *same* world and in this regard to the passage of Vaia highlighted the centuries-old entanglement of people, trees, and other non-human beings. The crash sites in the Fiemme valley are more than 'wounds' in the forest: they represent glimmers through which to look at these correspondences in action.

Woodlands have an emotional significance for the human community, which cannot be ignored. During my conversations with the inhabitants, each interviewee remembered a meadow, a footpath, or a grove to which she/he was particularly attached. Vaia overwhelmed all these places. This represented the storm's significant impact on

specific expertise in either forestry or meteorology; nevertheless, it would not have been possible to understand the cultural dimension underlying the Vaia storm without resorting to interdisciplinary information, whose work of selection and *assembly* is to be considered an integral part of the research methodology. The confrontation with forestry experts and technicians proved to be fundamental: besides their theoretical preparation, they possess in-depth and specific knowledge of their territory. However, without the contribution of anthropology, it would not have been possible to achieve a framework for the storm's cultural life, necessarily connected to the debate on climate change.

the inhabitants due to their emotional involvement with the territory. Thus, the sense of estrangement caused by Vaia concerns two levels: on the one hand, the suffering for the loss of one's 'intimate' places; on the other, the sense of unease towards an almost unrecognisable landscape.

One of the more impressive testimonies I have collected is from Roberta Segata, a local artist from Cavalese. The changes in her relations with the forest are paradigmatic of the general estrangement suffered by many inhabitants. It could be seen as a loss of familiarity with the valley. Roberta told me about the wonder she felt on the morning of 30 October when the light entered her house from a new direction. Those trees that until then had shielded the house had now fallen to the ground. When Roberta reached the place of the crashes, she felt a sense of rejection, as if the forest was opposing her. The tangle of roots, flattened trees and branches stave off Roberta from entering 'her' woods: "it was as if the forest wanted to keep me away as if it didn't want me to get into its wounds"⁸ (Roberta Segata, unpubl. Interview, 15 September 2020). It is not just artists, lumberjacks or forest technicians who use phrases like these. Even "normal" inhabitants, people who frequent the woods little or not at all, mentioned a sense of estrangement that takes many forms, which I find particularly evident in Roberta's words. In her case, it derives from a daily relationship with the forests, towards which she recognises non-human intentionality, independent of her personal projections. Her descriptions remind me of a composition of the Italian poet Franco Fortini, *Gli alberi* (The trees):

Gli alberi sembrano identici
che vedo dalla finestra.
Ma non è vero. Uno grandissimo
si spezzò e ora non ricordiamo
più che grande parete verde era.
[...]
Gli alberi sembrano identici,
la specie pare fedele.
E sono invece portati via
molto lontano. Nemmeno un grido,
nemmeno un sibilo ne arriva.
(Fortini 1973, 91)

The new landscape left the inhabitant of Fiemme without explanation and references. In some respects, this condition is paradigmatic of

⁸ Original text: "È stato come se la foresta mi volesse tenere distante, come se non volesse farmi entrare nelle sue ferite". All translations are by the Author.

the Anthropocene, as Latour (2017) recently affirmed; the multiple crises attributable to climate change – as in the case of Vaia – do not designate only the measurable alteration of a precarious (ecological, geophysical, or atmospheric) balance. Instead, they mark the limits of certain ways of conceiving the world and its relations: the ecological crisis is, therefore, and first of all, a crisis of meaning, and nevertheless, an environmental crisis. The sense of estrangement felt by the inhabitants of Fiemme could be seen as a specific ‘declination’ of this general loss of meaning; likewise, the Vaia disaster could be seen as a localised materialisation of climate change.

There is no doubt that Vaia became in recent years a central element in the social imaginary of the community, enriched by supernatural themes. The contained damage to the infrastructure and the absence of injured people or victims aroused wonder in the inhabitants; it was considered a sort of ‘miracle’. One year after Vaia, the mayors of the valley decided by mutual agreement to organise a ceremony in gratitude to Our Lady of Sorrow, to whom the community is particularly devoted. Thousands of inhabitants, from every municipality, took part in the pilgrimage to the Church of the Assumption in Cavalese, the oldest parish of the valley. Many believe St. Mary protected her devotees from the storm, thus explaining its apparently selective action, which damaged only trees. In his speech, the former Scario⁹ Giacomo Boninsegna said:

With this solemn Mass, Fiemme wanted to thank Our Lady of Sorrows for having saved the valley from human mourning during the Vaia Storm and to ask for new protection on the whole population, on our communities and our lumberjacks engaged in this enormous tree recovery operation and defence of the territory. The damage was massive. But, by Divine Grace, there was no victim.¹⁰ (Calamari 2019, 9-10)

It is important to note that the 2019 ceremony was a replica of another local ritual: the *Levada*, a procession instituted after World War II in gratitude to St. Mary for having protected the valley from bombing, that is, another possible disaster averted. In this perspective, regaining a sense of normalcy after a disaster means first making sense of the traumatic experience. From the extreme force of

⁹ The Scario is the representative and head of the Magnificent Community of Fiemme, elected by the Council of the *Regolani*.

¹⁰ Original version: “Con questa Messa solenne Fiemme ha voluto ringraziare la Madonna Addolorata per aver salvato da lutti umani la valle, durante la Tempesta Vaia, e per chiedere nuova protezione sulla popolazione tutta, sulle nostre comunità e sui nostri boscaioli impegnati in questa enorme operazione di recupero degli alberi e di difesa del territorio. I danni sono stati ingenti. Ma, per Grazia Divina, non c’è stata nessuna vittima”.

the wind to the width of the affected area, all these aspects heightened the representation of Vaia as an isolated and meaningless occurrence. Of course, this miraculous perspective does not seem to fit well with the general argumentation of this essay; nevertheless, it is still based on a distinct class of non-human actors, that of sacred figures such as St. Mary or other patron saints. Even if, unfortunately, there is not enough space to deepen this topic, it seemed appropriate to report it to show the heterogeneity of the attitudes of Fiemme's community. Another aspect that powerfully struck the community's imagination was the lack of animal carcasses among the crashes. This made the storm even more mysterious, as if the animals had been *purposely* spared.

Indeed hunters and forest rangers found some carcasses, but this fact has, in no way, affected the 'miraculous' representation of the storm. On the contrary, this prodigious connotation has made it possible to attribute to the atmospheric event a specific will¹¹ that transcends the physical laws; in this sense, the storm can be considered 'super-natural'. From another point of view, we can read this 'unnaturality' of the storm (Ballard, McDonnel, Calandra 2020) as a counterpart of the scientific analysis that links Vaia to climate change. It does not mean that the miraculous perspective is a filtered and popular version of scientific publication: on the contrary, these interpretations have different origins and coexist in the same imaginary. As we have seen in the Scario discourse, the 'miraculous perspective' shines through public speeches and official ceremonies, expressing collective imaginary features in an institutional form.

The theme of the miracle came up also during interviews. Many people speak of the storm using turns of phrase to avoid the word 'miracle', but some are more explicit than others. Italo Giordani – the principal historian of Fiemme – lives in Panchià and remembers the night of Vaia very well. He highlights that several aspects of Vaia remain imponderable, although the origins of the weather phenomenon are now understood.

GIORDANI Well, let's say it's not politically correct today. But it is understandable: no one died! How can you not ask yourself the question, considering what happened? Because I mean, I was here, I felt it: it was a disaster. But nothing, no deaths. And I make a juxtaposition – that's why I say, be careful to use the term miracle – I don't understand why, the Soviet Union that collapses in 1989, without

¹¹ Using an anthropological lexicon, we can translate this emic concept as 'agency'. Many inhabitants used the term 'will' (*volontà*) in conversations and interviews. It is not an arbitrarily choice: on the one hand, the term suggests a personification of the storm without affirming it directly; on the other, it recalls the supernatural will of Mary and the saints, tracing a symmetry between the intention to protect and to threaten.

anything happening, is something out of reality. It doesn't fit in history, it just doesn't fit in. But we cannot speak of a miracle [laughing]. [...] Or the fact that very few animals died, almost nothing. Even though they were literally under the trees as the wind blew them down.¹² (Italo Giordani, unpubl. interview, 19 October 2021)

According to Giordani, in 2018, there were some forerunners of the Vaia storm. Small meteorological events occurred between August and September, with rains and winds heavier than usual. Another phenomenon in the summer of 2018 was trees' massive production of seeds, especially firs and pines. The production of seeds in many plant species is not regular but depends on cycles of less or greater intensity. 2018 was a masting year in the Fiemme Valley, an event that did not go unnoticed by forest technicians. They work with scientific rigour, with figures and statistics, yet they murmur that this coincidence was strange: "it was as if the trees knew before...", but they cannot express themselves further. While arguing with Bruno Crosignani,¹³ I asked if there could be a hypothetical connection between the unusual mast seeding intensity and the passage of Vaia. He pointed out that what we humans interpret as a disaster actually represents a formidable opportunity for the expansion of the forest. The extreme winds tore down many trees, but they have also spread their seeds throughout the valley.

Another interesting phenomenon is the synchronisation of masting through the European forests, caused by a climatic teleconnection (Ascoli et al. 2017). With this term, Ascoli and colleagues refer to the capacity of certain climatic patterns to produce spatially correlated weather conditions, which influence trees' biological rhythms. In particular, the strict correlation of inter-continental masting is linked to the North Atlantic Oscillation (NAO) and its decennial trends. The NAO also plays an essential role in forming extra-tropical cyclones such as Gudrun, Vivian or Vaia, which raged through Europe over the last fifty years (Raible et al. 2020). Although a close correlation between Vaia formation and masting in Fiemme has not yet been demonstrated, this phenomenon concerns a specific relationship between

¹² Original version: "Beh, diciamo che oggi non è politicamente corretto. Però è comprensibile: non è morto nessuno! Come fai a non farti la domanda, con quello che è successo? Perché io ero qui, io l'ho sentito, e voglio dire: è stato un disastro. Ma niente, nessun morto. E io faccio un accostamento - ecco perché dico, attenzione a usare il termine miracolo - non capisco perché, una Unione Sovietica che crolla nell'89, senza che succeda nulla, è una cosa fuori dalla realtà. Non ci sta nella Storia, non ci sta proprio. Però non si può parlare di miracolo [ride]. [...] Oppure il fatto che siano morti pochissimi animali, quasi niente. Nonostante fossero letteralmente sotto gli alberi mentre il vento li abbatteva".

¹³ Bruno Crosignani was the director of the Cavalese district forestry office until September 2021.

non-human agents in which humans have no role. In this regard, as suggested by Ingold (2021, 6), it demonstrates that other living creatures could also enrol other kinds into their own lifeways.

The synchronisation of mastинг represents a kind of scientific explanation that could probably satisfy the forest technician of Fiemme. Nevertheless, it is not a question of explaining 'how' Vaia happened, but 'why'. As in Evans Pritchard's famous example of the collapsing granary (1937), a factual explanation is insufficient to determine why a specific dramatic event has occurred. However, in the aftermath of Vaia, the community of Fiemme asked itself another crucial question: how to react effectively to the crisis of traditional forest management models (Gabrielli 2019)? Among the several proposals elaborated over the years, one, in particular, caught my attention: mycoforestry, that is, an innovative approach towards mushrooms for the territory.¹⁴ The creators of this ecological strategy are two members of the Magnificent Community of Fiemme: Ilario Cavada, a forestry technician of the MCF, and Andrea Daprà, mycologist and hiking guide. Their initiative consists of inoculations of different mushroom species to accelerate the decomposition process and mycorrhizal seedlings to regenerate the territory. Furthermore, the symbiotic association of roots and mycelium guarantees considerable resistance to the plant, accelerating its development and protecting it from parasites and harmful microorganisms.

In particular, mycoforestry seeks to optimise and extend the benefits of mycelial networks by strengthening new plants and enhancing the resistance (and resilience) of phytocenosis. That is why this proposal also seems particularly significant for its decentralisation of the usual ecological perspective between man and forest. Two fundamental factors are the matching of chosen mushrooms and the timing of their application. First, to intervene effectively, it is necessary to evaluate the best possible combination between trees and fungal species, preferring the local varieties. They have also been able to promote future relations with insects and birds, enforcing the entire trophic chain (Stamets 2005, 74).¹⁵ The sympoietic abilities of mushrooms allow them to reconfigure the habitability of the

¹⁴ Paul Stamets and Peter McCoy are the principal pioneers in this field. The techniques developed and applied by these two scientists include water filtering (mycofiltration), the elimination of toxic waste (mycoremediation), the cultivation of edible plants (mycogardening), the contrast to insects (mycopesticides), and support for reforestation (Stamets 2005, 69-79; McCoy 2016, 335-78).

¹⁵ There are very few mycoforestry experiments in the world today. Stamets conducted one of the first projects at Cortes Island (Canada), using mycorrhizal spruce seedlings for reforesting severely depleted areas (Stamets 2005, 78-9). More recently, the LIFE MycoRestore project has as its primary objective "the innovative use of mycological resources to improve the productivity and resilience of Mediterranean forests threatened by climate change" (<https://mycorestore.eu/it/life-mycorestore-2/>).

territory for or against other species. We find an example in Tsing's masterful work on traditional Satoyama landscapes in Japan: an unintentional and non-human design created these habitats, particularly favourable to the growth of matsutake mushrooms on which a thriving trade has been grafted (Tsing 2015, 152).

Studies conducted after the passage of cyclone Vivian (Wohlgeomuth 2017) have shown the existence of a risky window period (protection gap) in which neither the fallen trees - now rotten - nor the new plants, still too young, can protect the damaged slopes. In this case, the inoculation of saprophytic fungi at the crash sites can accelerate the decomposition process of the wood on the ground, re-absorbing the biomass as humus (Stamets 2005, 73). Furthermore, through careful planning, these fungi can also inhibit the spread of certain fungal species in favour of others, thus preparing the reception of the new mycorrhizal plants. However, the definition of the experimental protocol required a lengthy preparation; the preliminary research phase, which is essential, includes a census of native fungal species to choose the most suitable mushrooms for inoculation.

Currently, possible candidates for experimentation are mushrooms of the genus *Trametes*, *Fomes* and *Armillaria*. *Trametes pini* (like *T. versicolor*) is a white caries fungus, one of the very few living beings capable of metabolising lignin. Andrea Daprà suggests pairing it with a brown caries fungus such as *Schizophyllum commune*, present in the valley and able to digest cellulose. The inoculation of both species would rapidly degrade the entire structure of the dead tree. There are also the species *Fomes fomentarius* and *Laricifomes officinalis*, also agents of wood decay: the second prefers conifers - larches in particular - and therefore would be appropriate for the composition of the Fiemme woods. Concerning the *Armillaria*, commonly known as *chiodino*, there are two species in the valley: *gallica* and *ostoyae*. The latter boasts an unsuspected record: it is the largest organism on the planet, whose mycelium occupies an area of hundreds of hectares in Oregon, connecting thousands of trees (Ferguson et al. 2003). The *Armillaria* is both parasitic and saprophytic, and due to its invasiveness, forest technicians regard with suspicion this mushroom; indeed, this reputation could hinder its use in test areas. Part of this negative consideration derives from the general perception of fungi in the Italian forestry world, a field that is significantly the responsibility of forest pathologists. The idea of mushrooms as harmful entities has a long history. We find an example in this unedited epistolary document,¹⁶ written by the forest manciple Guido Koch in 1931. From the one side, this document shows how much the nega-

¹⁶ The document is conserved in the historical archive of the Magnificent Community of Fiemme, box 452, dossier 20, doc. 20-21.

tive perception of mushrooms is rooted in the Italian scientific field; from the other side, it witnesses the century-old history of encounters between nursery workers and forest technicians of the Magnificent Community of Fiemme and fungal species:

As soon as the snow melted, in two forest nurseries of this Magnificent General Community of Fiemme - located at an altitude of 1500 m.s.l. - the very high mortality in spruce seedlings of one or more years was repeated. [...] I allow myself to send you some specimens with deep prayers of kindly wanting to classify the parasitic fungus and, if possible, suggest the relative means of struggle.¹⁷

The letter is addressed to professor Peyronel, director of the Royal Laboratory of vegetal biology of Florence. He deflates Koch's alarms, identifying the endemic mushroom species which affected the seedlings:

The spruce seedlings you sent me are infested with *Cladosporium herbarum* in the aerial part, especially in the leaves, and by a *Fusarium* in the roots. Some are also affected by *Botrytis cinerea*. It is rather difficult to say which of these fungi is guilty of the death of the seedlings [...] it is probable, however, that the primary cause of the deterioration was the too-long stay under the snow.¹⁸

Nowadays, Ilario and Andrea are trying to establish a new alliance with mushrooms, co-opting their sympoietic ability; in this sense, there is a drastic discontinuity with the vision expressed by Koch, passing from opposition to collaboration with fungal species in nurseries. As well as the other species suitable for inoculation, the *Armillaria ostoyae* is endemic in the valley and is already running in the sites crashed by Vaia. However, several members of the forestry technical office expressed concerns about this project. According to them, there is a real risk of losing control of the spread of the inoculated fungal species, but as Ilario brilliantly replied, "when did we ever have control over it?"

If anything, other creatures proliferate 'excessively' in the aftermath of Vaia. Several times, while I was accompanying Andrea and

¹⁷ Original version: "In due vivai forestali di questa Magnifica Comunità Generale di Fiemme, posti ad un'altitudine di 1500 m.s.m. si è ripetuta, appena sciolta la neve, la fortissima mortalità nei semenzali di abete rosso di uno e più anni. [...] mi permetto inviarle alcuni esemplari con viva preghiera di voler gentilmente classificare il fungo parassita e, se possibile, suggerire i relativi mezzi di lotta".

¹⁸ Original version: "Le piantine di abete rosso da lei inviatemi sono infestate dal *Cladosporium herbarum* nella parte aerea, e specialmente nelle foglie, e da un *Fusarium* nelle radici. Qualcuna è colpita anche da *Botrytis cinerea*. Dire quale di questi funghi sia colpevole della moria delle piantine è piuttosto difficile [...] è probabile, però, che la causa prima del deperimento sia stata la troppo lunga permanenza sotto la neve".

Ilario in their periodical surveys, we commented on the red 'flames' that colour large areas of the slopes. In the last two years, the forests of Fiemme have been affected by the massive spread of the spruce bark beetle (*Ips typographus*), an endemic insect and parasite of the Norway spruce. The attacked plants are concentrated in the woods of the Lagorai mountain range, but it is difficult to explain their distribution. In addition to the larger areas, smaller groups (even one or two isolated trees) are visible very distant from the Vaia crashes. So why did the bark beetle hit those specific trees? Andrea thinks that the mycorrhizal network that connects plants and mushrooms can provide helpful information on the 'logic' of the areas affected by the bark beetle. Instead, for Ilario, the reason lies in the Norway spruce's excess, so the insects do not act according to their standard behaviour patterns. Both, in their reasoning, tried to match their rational knowledge and personal experience of the forest with this new 'strange' habit of this pest.

The presence of the spruce bark beetle in this valley has a long history. In some respects, Fiemme is a privileged site for scientific research on this insect, thanks to the abundance of Norway spruce and the homogeneity of the forests (Ambrosi, Angheben 1986). The recent epidemic concerns all the areas damaged by Vaia and is, in fact, a direct consequence of that storm. Commonly the spruce bark beetle attacks only old or debilitated trees, but after the passage of Vaia, it also started to attack healthy and very young spruces. The bark beetle outbreaks add a further element to the temporal conjuncture of Vaia, representing a kind of long wave of the disaster. According to Andrea Bertagnolli, head of the forestry office of the Magnificent Community, the damage of this epidemic will most likely equal that of the storm.

For many inhabitants of Fiemme, it was spontaneous to compare the bark beetle emergency to that of COVID-19. Both cases were perceived as an attack by an invisible agent, with severe effects on the valley's economy. However, for both the spruce bark beetle and the virus, we must remember the conclusions of Frédéric Keck:

viruses are not intentional entities aiming at killing humans, but signs that the equilibrium between species in an ecosystem has been disrupted. (2020, 178)

In our case, the massive spread of spruce bark beetle is an amplification of the normal ecological relations between tree and insect induced by Vaia. However, even in this case, the epidemic is not a purely natural event: without the massive presence of Norway spruce, there would not have been so many outbreaks.

INTERVIEWED Even here in Moena the bark beetle is doing damage. Even here, in my opinion, the problem was underestimated and

they tried to control it with natural traps, but it is too little compared to the disaster. Then, most people are not aware of the bark beetle, perhaps only because of the “flames” that are seen in the forests. Many do not even know what it is, but who knows, who goes to the woods, understands. My husband, for example, after Vaia had said: “You will see that the *becherlo* arrives, and what damage it will do!”. And indeed this is worrying, also because it attacks healthy plants, not already sick ones. Then my husband was convinced that it didn’t attack the larch trees - it was a bit everyone’s idea - and, instead, he found a plant that according to him was attacked by the bark beetle. Despite being a larch. He was really amazed. The local forester had assigned him this dry larch to cut, quite normal: it happens that the larches dry out because they are slower to grow than the fir trees and, in this way, they are overwhelmed. Convinced it was shrivelled for this reason, instead, it was attacked by the bark beetle. He told me “for all my life I thought that the larches were not attacked, but now they are”.¹⁹ (M.P., unpubl. interview, 19 October 2021)

The explanation of the lumberjack for this absolutely unusual phenomenon lies in the concentration of the bark beetle: the impressive number forced the insects to eat even larches to feed themselves. Andrea Bertagnolli argues that these attacks are caused by a different bark beetle species, endemic but much rarer. Indeed, the presence of this larch bark beetle (*Ips cembrae*) was also confirmed to me by a timber trader, Adriano Giacomuzzi. In his decades of experience, he has repeatedly found larch trunks with signs of barking. Another riveting testimony comes from the forest custodian of Ville di Fiemme, Christian Guadagnin. The forests of Varena, the higher municipality in the valley, are within his competence. The slopes over Ville di Fiemme were rarely affected by bark beetle attacks. There was only one memorable case in 26 years, but the situation changed in 2020, with the diffusion of some outbreaks in marginal areas near

¹⁹ Original version: “Anche qui a Moena il bostrico sta facendo danni. Anche lì, secondo me il problema è stato sottovalutato e hanno provato a controllarlo con le trappe naturali, però è troppo poco rispetto al disastro. Poi, la maggior parte della gente non si rende conto del bostrico, forse solo per via delle “fiammate” che si vedono sulle foreste. Tanti non sanno nemmeno cos’è, ma chi lo sa, chi frequenta il bosco, capisce. Mio marito per esempio, dopo Vaia aveva detto: “Vedrai che arriva il *becherlo*, e che danni che farà!”. E in effetti preoccupa, anche perché attacca le piante sane, non quelle già malate. Poi mio marito era convinto che non attaccasse i larici, ed era un po’ l’idea di tutti, invece ha trovato una pianta che secondo lui era attaccata dal bostrico. Nonostante fosse un larice. È rimasto proprio stupefatto. Il guardaboschi gli aveva assegnato questo larice secco da tagliare, abbastanza normale: succede che i larici si seccino perché più lenti a crescere degli abeti e in questo modo vengono sopraffatti. Convinto si fosse seccato per questo motivo, invece era attaccato dal bostrico. Mi ha detto “tutta la vita ho pensato che i larici non venivano attaccati, e invece ora sì”.

the crashes. Christian immediately noticed the presence of this minority species:

There is a larch-specific bark beetle. It is not as ‘bad’ or numerous as that of the spruce, but it is still present in the woods, albeit sporadically. Here we have also some Stone pine that has been affected, by another species. Fortunately, there are no extensive attacks as happens in the fir, perhaps because the Stone pine is quite high and the temperature changes are frequent therefore the period in which the bark beetle can act is shorter. You can see small groups, of three or four plants here and there, a bit patchy.²⁰ (Christian Guadagnin, unpubl. interview, 28 October 2021)

According to entomology, the same bark beetle species affect Stone pine (*Pinus cembra*) and larches. However, beyond the taxonomic distinctions, the unprecedented attention of the inhabitants towards these insects is interesting. Not just forest custodians and timber traders, who know the bark beetle for strictly professional reasons. Even residents who frequent the woods sporadically now pay attention to a creature they would not normally even notice. The action of the bark beetle is visible to all the inhabitants of the valley thanks to the ‘flames’ that redden spruce forests. However, the human perception of the epidemic is fallacious insofar as it does not contemplate the insect’s vital rhythms; the reddened trees have already been abandoned by the spruce bark beetle, which has moved to those immediately adjacent without giving any visible sign. This condition makes it extremely difficult both to make a precise estimate of the spread of these insects and to undertake contrasting actions.

3 Conclusion

We can consider the Fiemme Valley as a complex scenario in which human and non-human actors seek to negotiate new forms of coexistence. For example, mycoforestry aims to regenerate the territory by accurately manipulating *correspondences* – or in Haraway terms, “establishing relationships” – between plant species and microorganisms. These encounters can also be problematic, as the recent bark

²⁰ Original version: “C’è un bostrico specifico del larice. Non è così ‘cattivo’ o numeroso come quello dell’abete rosso, ma è comunque presente nei boschi, anche se in modo sporadico. Qui da noi sono stati colpiti anche dei cirmoli, da un’altra specie ancora. Per fortuna, forse perché il cirmolo è abbastanza in quota e gli sbalzi di temperatura sono frequenti e quindi il periodo in cui il bostrico può agire è più breve, non ci sono attacchi estesi come succede nell’abete. Si vedono dei piccoli nuclei, di tre-quattro piante qui e là, un po’ a macchia di leopardo”.

bark beetle epidemic shows us. The unprecedented attention of the inhabitants towards these insects expresses the need to make sense of the post-Vaia events. However, these attempts are constantly frustrated by the impossibility of bringing actions and phenomena back to a purely human perspective. In all the cases I have presented and discussed, the human capacity to understand and influence (i.e. control) relationships with non-humans are severely limited.

The most interesting thing, in my opinion, is that this loss of control does not only concern non-human agencies but also human ones. As mentioned in the introduction, the Vaia disaster resulted from the cultural remodelling of two landscapes: the forest one, implemented on a local scale through silvicultural practices oriented by the wood market; the atmospheric one, implemented on a global scale with the emission of greenhouse gases. In both cases, human agency has intertwined with the temporal rhythms of other actors, inadvertently influencing atmospheric or biological processes. These correspondences did not cease with the passage of Vaia nor with the current bark beetle epidemic. The extent of this temporal conjuncture is “patchy”, using a term dear to Ingold (2021). It describes “a mosaic of temporal rhythms and spatial arcs” (Tsing 2015, 4), which is not reducible to a single event or a single agency. The plants cut down in 2018 had been planted two centuries earlier. They have had parasitic or symbiotic relationships with thousands of fungal species throughout their life. For decades they have been storing the carbon dioxide emitted by human activity. An inter-continental climatic teleconnection has favoured the massive production of seeds. A storm, boosted by centuries of anthropogenic emissions, felled these trees one October night. Three years later, the first outbreaks of bark beetle have begun in their ruined trunks. New mushrooms are turning woody matter into humus. New plants spring up in that humus from seeds dispersed during the storm. Where does this story really begin? Which moment is more important than the others? I agree with Mathews when he affirms that:

These landscapes are simultaneously [...] linked to multiple histories and rhythms that can help us escape from thinking of nature or history as singular. Multiplying our understandings of possible pasts and futures, and of who might be helped or hurt by these futures, makes the Anthropocene political. (Mathews 2018, 387)

His observations remain valid in our case also, although he refers to the pine and chestnut forests of the Monti Pisani. In this contribution, I have tried to emphasise non-human participation in these anthropogenic forest histories, focusing on the temporal conjuncture of the Vaia disaster. Trees, mushrooms, insects, and atmospheric patterns knot together their temporal rhythms to reconfigure the chang-

ing landscape of Fiemme. Faced with this transformation, the challenge for the human community is understanding how to take part in it, renouncing the illusion of control derived from the anthropocentric perspective.

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Are Stones Living?

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Abstract The article addresses a new theme in anthropology, focusing on intra-actions among humans and the mineral world. Within an anthropology of the environment, in the context of the Italian Piave river, where water and stones were described by old gatherers as living beings, my ethnography discerns a European form of animism that attributed subjectivity, intentionality, ability and agency to non-humans, revealing an interspecies network of relationships hidden by the western naturalistic worldview. These data contribute to a reflection on Descolian ontological animism, recomposing the discrepancies of perspectives vised as contrasting, as the Ingoldian perception of the *living being*, De Castro's perspectivism, and Barad's new materialism, towards an anthropology of life.

Keywords Stones' gatherers. Animism. Ontologies. Mineral and aquatic world. Living beings.

Summary 1Introduction. – 2 Humans. – 3 Stones. – 4 Water. – 5 Animistic-Perspectivist Interspecies Relations. – 6 Conclusions.



Peer review

Submitted 2022-03-27
Accepted 2022-06-08
Published 2022-07-27

Open access

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Citation Breda, N. (2022). "Are Stones Living?". *LagoonScapes*, 2(1), 163-176.

DOI 10.30687/LGSP/2785-2709/2022/01/009

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1 Introduction

The theme of the mineral world is not very popular in anthropology, or however much less frequented than issues related to animals and plants. Often it is quite excluded from the living world, or in other cases its place in the living world is uncertain. Eduardo Kohn (2013), for instance, says that mineral word is non-living, whereas Hallowell asserts that stones are alive and that they speak, for the Ojibwa people (as discussed in Ingold 2000).

I already had the opportunity to reflect on the issue in my studies and articles on the anthropology of nature (Breda 2000; 2001; 2016), where I have highlighted how an anthropological approach to the worlds of nature is definitely fruitful when considering not only human-animals-plants relationships, but also their relationships with water, soil and minerals. In this contribution I will focus on the mineral world, discussing some results of my field research and ethnographies (Breda 2003), and I will take a further step approaching the mineral and aquatic world, a theme to which I have dedicated other studies and the proposal of an Anthropology of Water (Breda 2005; Bougleux, Breda 2017). These studies reveal a network of relationships between the subjects in a living world that will contribute to a reflection on the categories of ontological animism, anthropology of life, intra-agency and other theories on the anthropology of the environment.

Specifically, the ‘world of stones’ I analyse here can be understood through a complex anthropological framework composed by Philippe Descola’s anthropology of nature (2005), some reflections on the living being and on animism by Tim Ingold (2000; 2011), the integral approach to the anthropology of life elaborated by Perig Pitrou (2014), the living thought of Eduardo Kohn (2013) and the approach based on the performativity of nature exposed by Karen Barad (2017). I intend to articulate these views and categories with each other, in order to analyse my ethnographic context.

The background is therefore the Ontological Turn (Brigati, Gamberi 2019; Mancuso 2018; Pellizzoni 2015; Bennett 2010; Cole, Froste 2010; Breda 2021), while I specifically refer to the concept of animism as revisited by Philippe Descola (2005, ch. 6; see also Brightman, Grotti, Ulturgasheva 2014; Bird-David 1999), within his quadripartition of the ontologies (naturalism, animism, analogism, totemism). Descola’s theory is enough renown to be summarised here, but it is important to underline that thanks to it, we can today speak of animism as a legitimate category of knowledge.

Moreover, I was inspired by Graham Harvey (2014) who asserts that animism is an ‘expanding category’, valid for reading the contemporary world, included western worlds, not only the colonial societies traditionally defined as animist in anthropology. Harvey’s intuition of dismissing animism as just archaic belief was possible

through Descola's fundamental reinterpretation of animism as an ontology.

Within the form of animism I discern in my ethnographic case, I will also briefly refer to perspectivism, as theorised by Viveiros de Castro (2019), who makes of it a question of political ontology and proposes it as a method of political 'Amerindianization' of the West. I will not be able to delve deeply into this theme here, but the challenge I propose is to discern a form of animism in an Italian natural-cultural context, a form of unexpected western animism that appeared among the interstices of the western naturalistic objectifying worldview.

My ethnography deals indeed with a relationship between humans and non-humans, expressed in a local popular culture along the Piave river (Northeast Italy), through forms of full semiotic (symbolic, iconic and indexical forms, as in Kohn 2013), which entangle in an ontology we could define animistic, in which humans, minerals, water, plants and animals are closely interconnected in a perspectivist view, and provided with the same agency. It illustrates a peculiar case of interspecies relation among human subjects: the stone gatherers of the Piave area, the Piave river's water, and the river stones [fig. 1].



Figure 1 The Piave river. Foto by R. Poloni, 2000

By a complex work of interspecific intra-actions and intra-agency (Barad 2017) as a tool for 'worlding' the world, I was introduced to an animistic context existing before the Piave river - today in full ecological crisis - was emptied of its waters and became the first European river to stop reaching the sea for more than a half of the year.

I developed my fieldwork in a particular island of the mid-course of the river, named *Le Grave* (a local term indicating gravel), a biotope consisting of a mix of gravel, stones and sand sediments, char-

acterised by a morphology defined “braided channels”, with a desertic and steppic microclimate (Bondesan et al. 2000; Franzin 2006).

I present here my ethnography in three connected points regarding humans, stones, and water, before concluding with some remarks on the Amerindian ethnography about stones by Hallowell as reinterpreted by Tim Ingold and with an analysis of the ontological meaning of my case-study, proposing a theoretical composition of some discrepancies emerged among these authors’ views.

2 Humans

I developed my research in a social context of historical marginality (Geremek 1978; Godelier 1977; Sanga 1990), meeting with the last stone gatherers (locally called *cariòti*, people gathering stones), whose livelihood was based on the gathering activity of natural elements, precisely the rivers’ stones, which they used to sell to the owners of limekilns, in the surrounding villages. *Le Grave* island of the Piave river was suitable for this activity and often frequented also by other gatherers: boatmen, hunters, fishermen, shepherds, and marginal peasants.

Until the 1950s, *Le Grave* was a hunting and gathering territory, belonging to a temporary, marginal and seasonal agriculture, alternate with activities of pasture and haymaking. The people frequenting this island were generally called *gravaròi* (people of *Le Grave*/the gravel) whose subsistence system in anthropology is referred at as hunting and gathering, while nowadays it appears as a marginal subculture counting a few social subjects from the sub-proletarian class.

Le Grave definitely was the last expression of a non-industrialised culture and of a silently oppositional, invisible, informal workers scattered group, whose main characteristic was a close proximity with the natural environment, developed in a very close performative entanglement among humans and the environment.

The environmental history of *Le Grave* island deals with an increasing privatisation process, an agricultural industrialisation, and transformations towards more and more scarcely sustainable development trajectories. Nowadays, it is almost totally reduced to an agricultural flat landscape, fed by fertilisers, chemical pesticides and forced irrigation, traversed by some asphalted roads and new bridges, occupied by vineyards, luxurious mansions, restaurants, bars, and touristic facilities.

In 2003, during my fieldwork, in the Piave area only thirteen stones gatherers were remembered, according to the memory of the last two *cariòti* I met. They did not own any land; they were generally poor, living in modest dwellings usually located on the riverbanks; they only owned a cart and a draught animal, and often they had not even a stable for their animals. Their work was carried out with mo-

dalities typical of the paleo- and pre-industrial work. They transported stones to the limekilns in the surroundings, going back and forth, every day, all year round, sometimes making up to three trips in a morning, transporting 25 quintals load per trip.

3 Stones

All the Piave stones were known, named and evaluated by the gatherers. It is possible to draft a complete ethnomineralogy (Breda 2003), based on the complex knowledge of the environment by the gatherers. They classified the stones according to their colours, forms, dimensions, composition, similarities and mineral mixture. The stones were classified according to the following principal modalities of identification:

- colour: turquoise, brown, white, pink, red, green, dark colours;
- visual patterns: spotted stones, striped stones, etc.;
- metaphor: *pan fracà* (light coloured stones, flat, like a ‘flat bread’), *scòrtha de bis* (similar to a local ‘snake’s skin’ colour) [fig. 2], *testa de bis* (similar to the colours of a ‘snake’s head’), *sangue de porthèl* (similar to the colour of ‘pig’s blood’), *mandoà* (looking like a handful of ‘almonds’), *barbagigio* (looking like ‘peanuts’), *venature di carne* (looking like ‘flash veins’), *pestasàl* (similar to a ‘salt pestle’).

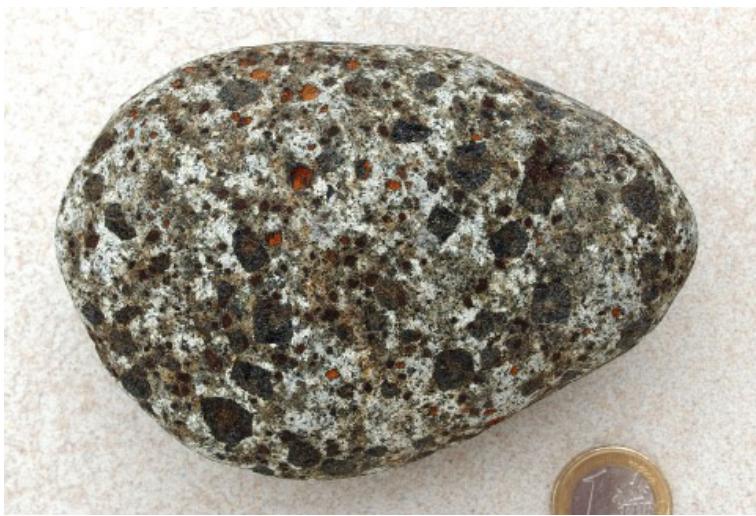


Figure 2 Stone defined as *scòrtha de bis* (similar to a local ‘snake’s skin’ colour). Photo by R.Z. 2015

But the most diffused and significant classification distinguished all the stones in 'good' or 'mad' and cover all the field of the Piave stones, with iconic, indexical and symbolic processes (Kohn 2017).

'Good stones' (calcium carbonate) were those producing lime. This category included the majority of white stones, the prototype-stones for lime making [fig. 3].



Figure 3 The prototype of 'good' stone. Photo by N. Breda, 2010

'Mad stones' (basalt, silicate, dolomite, sandstone, metamorphic mylonitic, siliceous chalk, volcanic glass, etc.), instead, were not suitable for lime production. The *cariòti* did not collect them; they are in fact used and still visible in the construction of the local stonewall houses, and called 'stones for wall' [fig. 4].



Figure 4 House built with 'mad' stones. Foto by N. Breda 2010

The *cariòti* work, therefore, did not consist in an indiscriminate gathering, but implied the selection, and the necessary knowledge about which stones were ‘good’ and suitable to be transformed in lime, and which were not. This is what allows us to define these subjects as ‘erudite’, because, despite their technically simple work, they developed a sophisticated knowledge about their environment, considering also that the Piave’s riverbed, especially in *Le Grave* island, appears to an outsider to be covered with undistinguished generic white stones, apparently all similar, yet of a highly difficult specialised identification [fig. 5].

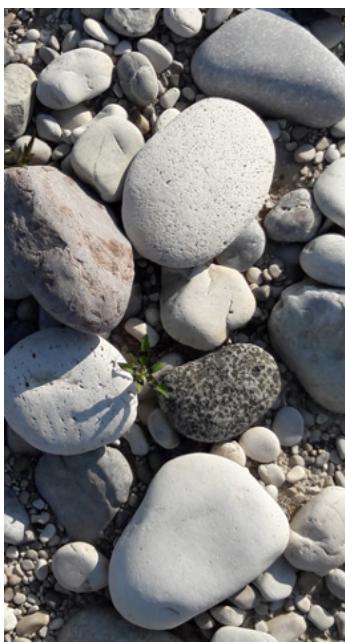


Figure 5 Only the large stone at the top right and the large one below are ‘good’ stones to collect.
Photo by R.Z. 2003

4 Water

Walking along the river shores, the *cariòto* had to decipher all the indications given by the natural context. We proceed, therefore, to deepen the relation between the *cariòto* and the principal element of this environment, the water. Among a varied local knowledge on water (here too a sort of ethno-mineralogy or ethno-water-logic, as I have discussed in my 2003 article), the most interesting for our consideration is the representation of the Piave water like ‘water falling in love’, as the local expression *l'aqua la va in amòr* indicates. This happened during the spring floods, following the melting of the snows from the mountains. Water, at that time, used to rise in the middle

of the river. It develops, as well, a proliferation of water plants in its bed that coloured the water in green. By sticking to the stones, plants made the river's bottom slippery.

According to the *cariòti*'s interpretation, in May water was different, it had other characteristics: it bloomed with herbs, changed its guise, increased in dimensions, got swollen in the middle. It ran faster, greener, deceptive, on a slippery bottom. In fact, most experts in crossing the Piave were misled by the May 'water in love', which was hiding its crossing paths, essential for reaching areas in or beyond the river, when bridges did not exist. The water with its flood is a water in metamorphosis, its body is changing guise.

By this metaphor, water was conceived as a big body, a sort of an animal body, given the biological 'oestrus' of the metaphor about water 'in love'. It is described as a living body, a feminine body, looking pregnant when it rises, fertile, when giving life to many water herbs, also considering that the local language defines the river using the feminine gender *la Piave*. From the stones gatherers' point of view, three kingdoms melted into the water world: water is like a lively body, making possible the construction of interspecies relations among diverse worlds: animal, vegetal, and human ones.

5 Animistic-perspectivist interspecies relations

We can now examine the connection of the three species - humans, stones and water - as a sort of perspectivist relationship, consisting in the vision of the gatherers about a 'humanized water' that moves the stones. To imagine the body as an ontological differentiator has a preponderant role in the anthropological animistic vision. In this context, the 'body of the water' has the characteristics of animal bodies (e.g. 'oestrus' and fertility), and is also gifted with intentionality, technical ability (knowing how to carry around elements), habits (as floods), affectivity (as love), and communication (indicating to connoisseurs where not to cross the river, avoiding slippery zones). Water moves the stones 'like a herder' conducting animals, from the mountains to *Le Grave* island: observing the water during the flood, the *cariòti* indeed claim it is conducting the stones 'as animals'. Downstream, the *cariòti* physically complete this kind of domestication selecting and collecting the stones steered by the water.¹ These views imply a chain of actors in simultaneous relations

¹ I have read these ethnographic data, in another essay (Breda 2019), with regard to the domestication process, where male and female animals are considered as 'good' or 'mad' - as well as the stones are considered here - and men have to let them go, or to protect them.

(as in Viveiros De Castro's *birra y manioc*), where appearances and resemblances change according to the subjects' actions and where the body (and his exteriority) is the fundamental subject.

As we know, in Descola (where perspectivism is an "ethno-epistemological corollary of animism", Descola 2005, 202), animism is characterised by the equality of interiority and difference in exteriority, and implies the attribution by humans to non-humans of an interiority identical to their own. Such a stance humanises non-human elements, in this case water, and allows to establish communicative relationships among them. Therefore, the similarity of interiority authorises an extension of the state of culture to non-humans, with all the attributes it implies, from intersubjectivity to communication (Descola 2005). Here I assume that an animistic ontology in my ethnographic context is perceptible by the attribution of a feminine body to the water, the attribution of qualities to the stones and by specific interaction of the gatherers with all the environment. Their perception of the environment is that of a chain of intra-actions in-between gatherers, stones and water. The vitality of this type of animism results from the complex network (maybe an Ingoldian meshwork) of relationships between the actors of this environmental scene.

Now, specifically, I want to recall Hallowell's ethnography, *Ojibwa Ontology. Behavior and World View* (1960), on the Ojibwa's account about a stone that opened its mouth, rolled a long way and answered human questions. We find an interesting discussion of this case in Tim Ingold's essay, "A Circumpolar Night's Dream", included in his book *The Perception of the Environment* (2000). Here Ingold asks how to face the challenge of 'bringing people back to earth', restoring them in the context of their full involvement in an environment. As we know from his huge theoretical work, he intends to investigate what actually is that makes something alive or animated. As we also know from the controversy with Descola (Breda 2021), Ingold does not consider in his theory nor ontological approaches, nor cosmological representations, but develops a relational approach, defined as *in-between*, seeing the world as a total field of relationships, in continuous generation and flow, which he also calls *meshwork* (Ingold 2011).

Particularly, in Ingold's *The Perception of the Environment*, we find a discussion concerning being alive and living things centred on the nature of stones in the Ojibwa's view, as described by Hallowell, a well-known reference for the Ontological Turn and for many related considerations.

Starting from his question "What makes something alive, or animate?", Ingold refers to Hallowell's interesting anecdotes on stones:

Hallowell heard tell of an instance in which, during a ceremony, a stone was observed to roll over and over, following the master of the ceremony around the tent, another in which a boulder with

contours like a mouth would actually open its ‘mouth’ when tapped by its owner with a knife, and yet another where a man asked a particular stone whether it belonged to him and received a negative response! (Ingold 2000, 97)

When Hallowell finally asked an old man if *all* the stones were alive, the man “reflected a long while and then replied, ‘No! But *some* are’”. Ingold proceeds in his analysis:

As Hallowell recognizes (OO, p. 23), the categorical distinction between animate and inanimate is not one that Ojibwa articulate themselves, but was rather imposed by Western linguists [...]. Ever since Plato and Aristotle, it has been customary in the West to envisage the world of nature as made up of a multitude of discrete objects, things, each with its own integrity and essential properties. [...] There has been much debate about what it takes for something to be alive: vitalists argued for the existence of some mysterious life-force that they thought was infused into all organisms; mechanists dismissed the idea as unscientific hocus-pocus, but in their enthusiasm to reduce organisms to clockwork they virtually dissolved the animate into the category of the inanimate. The problem was only resolved, after a fashion, by the discovery of the DNA molecule, popularly hailed as the ‘secret of life’, which seemed to offer a basis for distinguishing living things that satisfied the objective canons of natural science. Throughout all this debate, however, one fundamental idea has remained unquestioned, namely that life is a qualifying attribute of objects. (96)

For the Ojibwa, instead, animacy depends on the context, on the whole field of relations in which things are situated:

the liveliness of stones emerges in the context of their close involvement with certain persons, and relatively powerful ones at that. Animacy, in other words, is a property not of stones *as such*, but of their positioning within a relational field which includes persons as foci of power. Indeed strictly speaking, there are no ‘natural objects’ in the Ojibwa world to classify [...]. The point is not that Ojibwa draw classificatory distinctions along different lines, but rather that in their ontology, life is not a property of objects at all, but a condition of being. (97)

As we know, Tim Ingold observe particularly the role of the movement in living process:

[Returning to] the rolling stone that had been observed to move following its master ... On what grounds was it judged to be alive?

Clearly, the critical criterion was that it had been observed to move [...]. The movement is not an outward expression of life, but is the very process of the stone's being alive. The same could be said of trees, which are included in Hallowell's list of things formally classified in Ojibwa grammar as 'animate' (OO, p. 23). [...] the winds and the sun are persons for the Ojibwa, and can move trees much as powerful humans can move stones. (98)

Thus, Ingold concludes about this life process:

these movements, of the sun in the heavens, of trees in the wind, of animals and human beings as they go about their everyday tasks, do not take place against the backdrop of a nature that is fixed, with its locations and distances all laid out in advance. For they are part and parcel of that total life process, of continuous generation, through which the world itself is forever coming into being. In short, living beings do not move upon the world, but move along with it. (Ingold 2000, 98)

But life in this sense is not given, ready-made, as an attribute of being that may then be expressed in one way or another. It is rather a project that has continually to be worked at. Life is a task. As an ongoing process of renewal, it is not merely expressive of the way things are, but is the very *generation* of being. (97)

6 Conclusions

In my anthropology beyond the human sphere, I adopted a composite approach in order to elicit the nature/culture relation between human and non-human, also inspired by Descola's and Ingold's theories, with the corollary by Viveiros de Castro and by some suggestion on the non-constructivist method by Karen Barad and Eduardo Kohn that explores representational forms that go beyond human language.

This approach allows us to read a series of ethnographic data in an innovative way that shows a diverse relation of humans with the so called 'nature', which has been socially and culturally activated in the western world, and hidden by naturalism, a western cosmology where nature is externalised, objectified and commodified.

The animistic relation is here instead constituted by continuous passages and connections between human and non-human bodies, by the acknowledgement of the agency of natural elements, and by the full vitality of water. A view that includes a specific attribution of subjectivity, intentionality, ability and agency to non-humans, specifically to the water.

So, are stones living? If my analysis is correct, we can answer 'yes', within an 'extended' animistic ontology. In the Italian context presented here, we find only traces of animism, which probably lack references to myths and signs of metamorphosis. Nevertheless, some interesting conclusions can be found.

Stones gathering did not take place with respect to a passive, unchangeable material. Gathered stones constitute a product itself, a result of several *agencies*. Stones were found and could be gathered only if the Piave river drove them downstream - mixed by its floods, whirled, shaped, strengthened. This elaboration is an important conceptual step, in order to understand that 'good' stones were provided by the water agency, they came with it, mixed by it, hiding some 'mad' elements and highlighting some 'good' ones, and because of the lack of floods, nowadays extremely scarce, the gatherers could no longer find good stones.

The *cariòti* do these actions in a relational world, a world connotated by some animistic/perspectivist characteristics, where water play the most important role, a role of minerals' domestication that humans can read and inter-act with (Breda 2019). The relation stones/water/people does not lead to a dependence of nature from human beings, as in a complete domestication process, where animals definitely depend on humans (Barrau 1978; Ellen, Fukuj 1996; Haudricourt 1962). The animist relation with stones and water has to be repeated and constantly renewed at any season. Humans and non-humans are in a co-evolutional living process (Stepanoff, Vigne 2019), a lively cooperation into a shared environment, a *natural-cultural* resonance where nature and culture are inter-active or intra-active subjects.

In this process, the relationship between subjects is a form of local, traditional, indigenous ecological knowledge (the IK, or TEK). It is the recognition of a sort of equal relationship between humans and non-humans that allowed to perceive and to manage their shared environment as a whole, remembering Ingold's theory:

Animacy, in other words, is a property not of stones as such, but of their positioning within a relational field which includes persons as foci of power. (Ingold 2000, 97)

As Tim Ingold writes, life is not an intrinsic property of objects but a condition of being dependent on the context, and vitality is not a property of isolated individuals, but of the total field of relationships in which they are interacting. He remembers that "living beings do not move upon the world, but move along with it" (Ingold 2000, 98). So, the stones of the gatherers live within a living world composed of humans, water, landscape etc., in a context I defined animistic. Definitely, reading these data through Descola's and Ingold's theories, and recomposing some of their discrepancies, we can say that we are

dealing with an ontological animism where stones are living in this moving world of humans, stones and water.

Altogether, on a theoretical level, these ethnographic data are significant if considered through the lens of Descolian animism, Ingoldian environmental perception, and Viveiros de Castro's perspectivism, an entanglement in which these data work together composing an Anthropology of Life (Pitrou 2014) as a field in a world *with it*.

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