

Lagoonscapes

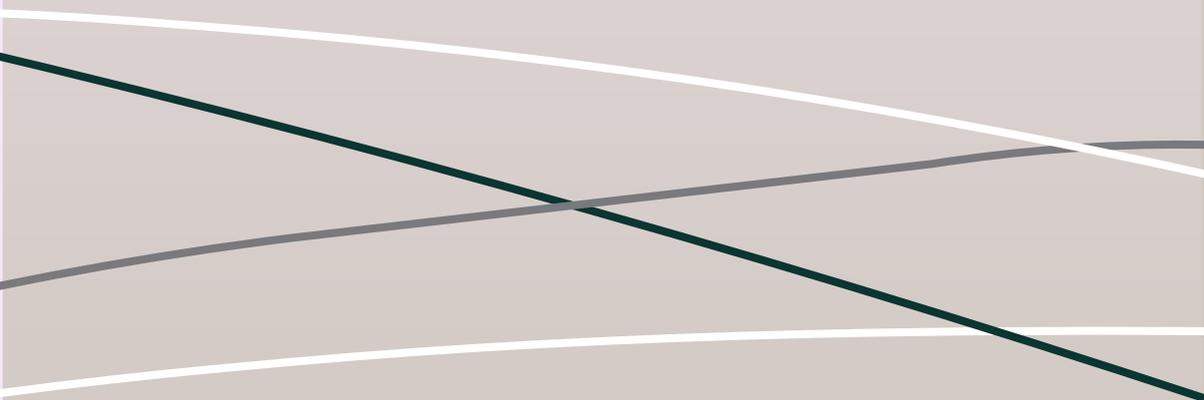
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Serenella Iovino

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**Humanities, Ecocriticism
and Multispecies Relations.
Proceedings (part I)**

edited by Stefano Beggiora and Lia Zola

Editorial

Stefano Beggiora

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2021 has been *Lagoonscapes's* first year of activity. Having passed the 'experimental phase' of the first issue, this second number delves decidedly into the multiple facets of the Environmental Humanities debate. The volume is dedicated to a conference that was held at Ca' Foscari University on 28-29 September 2020. The prestigious Venetian sixteenth-century *aula magna*, the lecture hall, embellished with antique stuccos and Murano chandeliers, hosted an international meeting of scholars, at a very particular historical moment: the first pandemic wave of SARS-CoV2. There was not yet full awareness of the duration of the emergency on the world scene; therefore, almost as in an unreal stillness before the storm, the works took place at the prelude to what would later be called the second wave, with its subsequent lockdown period. The conference, dedicated to Environmental Studies from a multidisciplinary perspective, was entitled *Humanities, Ecocriticism and Multispecies Relations*¹ and today we can say that it was undoubtedly a shining example of the energy that animates our academic debate. More than resilience, which above all today seems to indicate a passive resistance, the participants have witnessed a great desire to meet, to compare their research experiences, trying to develop new philosophies capable of interpreting the role that our species should play in the planet we live on. The very strict rules imposed by the "COVID-19 Risk Management Protocol

1 The event was realised thanks to the funds and collaboration of the Department of Asian and North African Studies, the International Center for the Humanities and Social Change of University Ca' Foscari of Venice, and the Department of Foreign Languages and Literatures and Modern Cultures of the University of Turin.

and Plan to Mitigate Transmission in the Workplace” challenged all the speakers to demonstrate that being present in the academy is an important testimony to the fact that scientific research must always be at the forefront, even in a time of global disorientation. From a purely technical point of view, in the days of the conference, Ca’ Foscari hosted twenty speakers, and the organisers managed about two hundred seats booked in rotation, having two hundred more guests attending remotely the sessions. Finally, fifteen hours of video footage were produced. Probably today this is not an exceptional outcome, but until a few months ago we were not so used to the so-called ‘dual mode’ of organising conferences; moreover, the event was still significant since it has been the only one held in presence at the University of Venice between the first and second lockdowns.

The concept note of the event, whose proceedings *Lagoonscapes* is delighted to offer to its readers in two dedicated issues, proposed a sort of journey around the world through cultures, in particular of indigenous peoples native to Asia, Oceania, Northern Europe and the Americas.

The first of these two issues opens with a general reflection on the contribution of anthropological disciplines to the wider world debate on Environmental Humanities. As the editors Stefano Beggiora and Lia Zola explain in their introduction, an important divide in the history of the discipline was the so-called ontological turn, which imposed on both, its admirers and its detractors, the need for a new relational approach between humans and everything around them: the paradigm of multispecies relations. It is a non-anthropocentric approach that imposes new cosmovisions, perceptions of the territory, but above all a system of incorporation of non-human beings into a dimension of kinships and interaction with otherness.

The entire first section of the volume is therefore dedicated to South Asia. The first article is proposed by Davide Torri and consists of ethnographic research on the roof of the world: the Nepalese Himalayas. In one of the richest regions on the planet in terms of biological and cultural diversity, a web of connections between humans and non-humans emerges through the ontologies of indigenous minorities, as well as through practices and discourses of shamanic religious specialists. In the second article, Stefano Beggiora analyses the most timely issues of contemporary ecocriticism in classical Indian literature, with particular reference to the great epics of the *Rāmāyana* and *Mahābhārata*. Beggiora demonstrates how a new philosophy in response to the environmental crisis can be deduced from comparable moments of turmoil and change characterising the religiosity and spirituality of ancient India. Uwe Skoda, on the other hand, proposes an extremely topical subject for the entire Indian Subcontinent (and beyond), namely the drastic increase in mining and quarrying activities, clashing with the resistance movements of

indigenous minorities (*ādivāsī*) and environmental protection movements. The research is halfway between the historical-religious and the ethnographic investigation and proposes a case study in the Odisha region: here what is a resource for some, for others is a source and reason for life; whereas some see homologation and development, others see the loss of the sacredness of the territory, displacement of communities, and cultural genocide.

The fourth article shifts our perspective to Islamic religiosity, in contiguity with India for its Muslim traditions, but with particular reference to the Arab world. Ida Zilio-Grandi reminds us that in this scenario the ecological theme is pivotal, but it has too often been ignored by Western scholars, generally due to a relatively poor access to the means of communications rather than to the texts, in any case both in the Arabic languages. On the other hand, the Koranic and medieval sources insist on the environmental element as an integral part of God's creation and the relative responsibility of humans in this matter constitutes by itself a principle of sustainability. In addition to the animated debate developing within Islam on ecocritical subject in contemporary times, the sacred literary perspective proves that what we now call Environmental Humanities would have developed in the East (and in the Arab world in particular) well before the West reserved its attention to them. From the Arab world, then, Lia Zola takes us deep into the remote Siberian steppes, in particular in the far eastern territories of Sakha-Yakutia, a republic of Russia. After a dense theoretical introduction on multi-species ethnography, the author proposes an anthropological case study about reindeer herders and Siberian wolf hunters. In this extreme landscape, probably among the least anthropized territories in the world, with a very rigid climate, romantic clichés having sometimes watered down the discipline are swept aside, and a clear example of the great complexity and stratification of possible human-animal relationships is outlined.

Beyond the obsolete antinomy between nature and culture, the theme of indigenous eco-cosmologies seen as non-dualistic perspectives on human and non-human agencies in a mutually shared world, returns predominantly with the work of Lidia Guzy. In her article, the author proposes an intriguing analysis dense of insights and references, through and beyond the ontological turn: its leitmotifs are the most recent redefinitions of the shamanic phenomenon, the critique of indigenous cultures to the values of a certain globalised modernity as the apotheosis of Anthropocene. In doing this, Guzy makes particular references to the Amazonian reality and to the famous Yanomami testimony of Kopenawa. The seventh article is introduced in its first section by Giovanni De Zorzi, who analyses the notion of 'soundscape' and 'acoustic ecology' through an erudite and rich discussion highlighting its historical and aesthetic roots. On this premise, Alessio Calandra proposes an innovative case study about Disn-

eyland Paris amusement park, in which the paradoxical reproduction of various natural and artificial 'soundscapes' is the warp that weaves a weft of sensory elements, driving customers towards an increasingly consumerist approach. Finally, Rita Vianello takes us back to the Venetian Lagoon, thus reconnecting the second and the first issue of *Lagoonscapes*. As the author sometimes jokingly uses to say, she has dealt with perhaps one of the most bizarre case studies of multispecies ethnographies, or rather human-mussels relationships. It is an ethno-historical study of fishing activities in the Venetian surroundings. Less popular in the past, today mussels have become a symbol of the refinement of *haute cuisine*, changing the local dynamics of fishing and farming and the economy of a certain part of the lagoon. The step towards anthropomorphism and the metaphor of lifestyles is short: this activity becomes the keystone of local identities, a way to know and maintain relations with the territory, a measure of its own well-being.

Further contributions on South America and India, articles from China and the deep North-Europe and also from Oceania will reach our readers in the next issue. And now, we are delighted to leave the floor to our authors.

Looking at the Anthropocene Through the Multispecies Prism

Stefano Beggiora

Università Ca' Foscari Venezia, Italia

Lia Zola

Università degli Studi di Torino, Italia

I.

I was born in the desert
learned to cherish water
like it was created from tears.

I grew up hearing the legend, the lesson
of the Stone Mother who cried
enough cries to make an entire lake
from sadness. From her, we learned
what must be done and that the sacrifices
you make for your people are sacred.
We are all related
and sometimes it takes
a revolution to be awakened.

You see, the power of a single tear lies in the story.
It's birthed from feeling and following
the pain as it echoes into the canyon of grieving.
It's the path you stumble and walk
until you push and claw your way through to acceptance.
For us, stories have always been for lessons.¹

¹ Tanaya Winder, "Stone Mother": <https://www.nrdc.org/stories/five-indigenous-poets-explore-loss-and-love-their-native-lands>.

1 An Anthropological-Environmental Awareness

In recent times, the debate about the Anthropocene, and therefore around the age when humans began consistently to impact on the climate and ecosystems of the planet – as well as its hypothetical beginning – has animated academies around the world. Separately but relatively contextually to the hard sciences, the awareness of the ecological crisis has made its way into the humanities at different times, in accordance with the way in which environmental issues emerged predominantly in the related theoretical frameworks. It is possible to argue that the first considerable works of environmental history appeared in the 1980s, while ecocriticism began to emphasise its literary and cultural analysis oriented to the environment from the early 1990s onwards (Buell 1995; Solnick 2016). In particular, in anthropology, the environmental field appeared about fifty years ago, immediately after the spread of environmentalist turmoils, i.e. the movements of protest and of awareness regarding issues related to environmental protection (Dove, Carpenter 2008). In this sense, the discipline could be considered parallel to environmental philosophy, or better still ethics, in which the debate began to stand out on the global scenario from the 1970s onwards. With the rise of environmental movements and ecological paradigms in the 20th century, anthropologists too have adopted new perspectives. In this fervent scenario we witness the birth of another discipline, namely the anthropology of the crisis, which stands out in the wider background evoked by the above-mentioned coining of the not so recent definition of Anthropocene (Eriksen 2016; Boland 2013). As highlighted in the previous editorial in *Lagoonscapes*, it is safe to argue that Environmental Humanities, anthropology of the crisis and the new frontier of the study of human-environment relationships developed together and are closely related to each other indeed. In fact, when a cultural structure faces an environmental criticality it must face a series of interconnected systemic crises as well. This has meant that finally scholars of different disciplines have realised that the crisis due to the contamination and practices of extreme exploitation of nature is also affecting the life of societies at any latitude. It is therefore imperative today to study the whole dynamics that are interwoven between communities and neighbouring environments, the strategies of adaptation and resilience of the agents who operate in these subtle balances.

Alongside the ecocritical reinterpretation of world literature, be it classical or modern, calling it into question in order to rediscover the relationship between humans and environment also in a historical perspective, the importance of an ethnographic investigation in rural and indigenous contexts also emerges. This should highlight the fundamental difference between societies in which human be-

ings still live in strong interdependence with a hosting territory and those in which capitalist and exploitative dynamics have irretrievably separated these two dimensions. Ethnography within Environmental Humanities reinforces the effort to understand, for example, issues related to justice and the accessibility to natural resources and the management of common goods for various communities. The intertwining, between literature, philosophy, history, art, anthropology is also essential to understand new forms of stratification and inequality related to commodification and various aspects of the liberal economy, developing new ways of thinking about interdependencies. Environmental history, even if only relating to the last few centuries, cannot therefore avoid proposing a new critical reading of concepts and phenomena such as colonialism, capitalism, imperialism, shaping contemporary opinions on a local and global level. In other words, through a path paved with interdisciplinary interconnections, an ecological awesomeness is today consolidated. This nonetheless implies different theoretical-methodological perspectives and a constant comparison with the realities explored by ethnographic research, a new critical reflection on the practices, policies and power relations involving the themes of environmental conservation and sustainable development (Hughes 2001; Ingold 2000).

2 Towards a New ‘Cultural Biodiversity’

Perhaps the greatest achievement of current anthropological-environmental critical awareness consists in the certainty of the fundamentally cultural, social and historical feature of the category ‘nature’, and of what is commonly understood as natural’. In our first issue – see the editorial in *Lagoonscapes*, 1(1) – it was mentioned how the ‘French’ ontological turn had contributed considerably to shifting the scientific debate towards the recognition of the importance of indigenous peoples’ perspectives on the world and consequently on overcoming the dichotomy between nature and culture. Philippe Descola, in his most famous work (2005), had outlined four ontologies (animism, naturalism, totemism and analogism) capable of receiving and sharing all the cosmovisions inventoried by anthropologists. The project, however grandiose, is for many today considered outdated and not always fully acceptable, since it once again places a Western-style categorising superstructure on indigenous cultures. However, it had the undisputed merit of proposing to Western anthropology a different perspective – at the same time less presumptuous and less fragile – on the cosmovisions of otherness. In the scheme described by Descola, the Achuar of the Amazon are animists: their conception of the surrounding universe provides that all entities share the same interiority and differ according to the different exteriorities.

Furthermore, each entity observes the world from a specific perspective defining it, inserting it into a certain set of relationships. Eduardo Viveiros de Castro (1998; 2009) defined this sort of metaphysics as “perspectivism”; but instead of understanding it as an ethno-epistemological corollary of animism, he uses it as a lever to shift reflection on the world towards the point of view of indigenous cultures, much less anthropocentric and radically ‘other’.

The historical evolution of this type of caesura comes, after all, late in the course of the development of Western thought. But the nature-culture opposition is today even more obsolete and no longer universally applicable, precisely since it lacks meaning in the multiple worlds characterising many native cultures of indigenous peoples, which perhaps the contemporary West has so far poorly understood. The ontological turn, intended here only as a starting point for new ways of thought and new studies, emphasised how modern naturalism is only one among the possible expressions of a more general structure mirroring the different perceptions of the world.

Following this intense debate, we have recently developed the project for a conference that would investigate the possible interface between sustainability, ecology, and the environment. It was interesting for us to analyse how this interface is reflected in religions, literature and folklore of the indigenous peoples of the world: in Asia, in the Americas, in Oceania. The idea consisted of highlighting the ways local cultures and ethnic and religious minority groups possibly face ecological crises and environmental challenges cutting across national, socio-political, epistemological and linguistic borders, particularly in the contemporary world. The ontological turn is once again useful, in this context, since it has also dealt with the theme of the so-called ‘multispecies ethnography’ (Goodman, Heat, Linde 2003; Ingold 2016): this approach is concerned with the inclusion, in anthropological research, of the life and death of all creatures that have too often remained on the margins of scholarly work for decades. According to this perspective, animals, insects, plants and other organisms began to appear alongside humans with construable biographical and political lives. All in all, it is honest to observe that reading of animal and plant species, atmospheric agents and the environment in a broad sense is as such an almost inevitable part of cultural anthropology. In the past, these aspects have been interpreted in various forms that have marked the history of the discipline. In other words, it is easily recognisable that in anthropology there has always been an interest in the non-human as an aspect of culture. But the growth of interest in these issues in recent decades is due precisely to the debate that has arisen around the ontological turn, in which, among other issues, the problematization of the boundaries between human and non-human, the relativisation of Western naturalism and in particular the antispeciesist issues stand out

(Fabiano, Mangiameli 2019, 8). In other words, multispecies ethnography rejects the anthropocentric paradigm and in particular does not study non-human beings for what they mean for the human perspective, but rather aims to investigate the bio-cultural relationship that the living universe weaves across the species. This latter aspect is clearly a thought, a movement, an attitude opposing to the prejudicial belief that the human species is superior to other animal or plant species: on the contrary, humans are one of the innumerable forms within the larger picture of nature, one among the different entities that struggle in the kaleidoscopic and polychromatic multiverse of the forest, or of the mountains, as they are frequently understood by indigenous peoples. But ultimately, even in the city a multispecies ethnography can be rediscovered... Nevertheless, in the larger picture of the connections between humans and non-humans, Anna Lowenhaupt Tsing (1993; 2004) reminds us that human nature can be seen as an interspecies relationship.

In the poster heralding the start of the conference, we observed that anthropological accounts dealing with animals, but also with other non-humans such as invasive plants and microbes, ramify across places and spaces, entangling bodies, politics, and ecologies. Multispecies ethnographers, like multisited ethnographers, follow genes, cells, and organisms across landscapes and seascapes, shaping what Bruno Latour (2004, 2006; see also Haraway 2008) has defined the “nature-culture” articulation of relations among humans and non-humans. He argues that social scientists should not decide in advance what sorts of things constitute “society” and what sorts of things constitute “nature”; instead, they should proceed as if those categories are the outcomes, not the starting points, of complex negotiations between people and objects.

For these reasons we finally asked our speakers: is it possible to declare – mentioning Eduardo Kohn (2013) – that forests think? Can mountains, forests and lakes do politics? Who is entitled to speak for non-human species? Already for its part, the ontological turn had highlighted how the implications of the debate would have had possible social and political – even more than epistemological – repercussions. However, these questions become crucial the moment they merge into more global concerns for sustainability and exploitation of the planet’s resources. Therefore rhetorics, ideologies, logics, practices and policies, languages not so much *about*, but *of* the environment – just to quote Milton Kay (1996) – are subjects of enormous importance and critical consideration by contemporary environmental ethnography.

In conclusion, we like to remember how, back in 1962, Claude Lévi-Strauss observed that the only real and great trouble for a human community, which can really prevent it from achieving its best potential, is that of being alone. But there are different ways of being alone

just as various types of isolation exist: perhaps the greatest danger nowadays is precisely that of slipping into the homologation of a single thought, of a hegemonic monoculture, without freedom of expression and realisation. Here the theme of diversity, even in an abstract, sublimated sense, becomes of crucial importance. Quoting Carlo Sini (2012, 16), if biodiversity is important, and it is important to safeguard it from a biological or naturalistic point of view, this cannot be achieved without saving also its cultural face. A sort of ‘cultural biodiversity’ and its very awareness is in conclusion at the basis of the salvation of our species. It is perhaps only in this perspective that it will be possible to glimpse the face of that *Ecce homo redux* to which Latour refers to, in a tragic and ironic way at the same time, in the work *Cosmocoloss* (Latour, Latour, Ait-Touati 2011). Based on these premises and these challenges, the international conference *Humanities, Ecocriticism and Multispecies Relations* was inaugurated in Venice in September 2020. We are therefore pleased to present below the collection of the first part of the proceedings bloomed from this dense and compelling event.

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Trees, Birds and Other Non-Humans Mythological Entanglements with Landscape, Flora, Fauna and Spirits of the Himalayas

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Abstract This paper takes into account ideas about landscape and environment as they emerge from the study of beliefs, mythology and ritual activities of religious specialists of the Himalayan region, showing a deep and enduring web of relational entanglements between human and other-than-human communities. The notion of personhood seems, in fact, to transcend the human dimension in order to include a wider and larger set of other-than-human communities, including mountains, waters, plants, animals and other classes of beings.

Keywords Himalaya. Indigenous people. Mythology. Folklore. Shamanism.

Summary 1 Introduction. – 2 Blood Relations: Multi-Specific Narratives and Cosmopolitics. – 3 Conclusions.



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1 Introduction

If the landscape we inhabit, as written elsewhere (Torri 2021), is the residual reassemblage of physical elements after eons of cataclysmic events, it should not be a surprise to look at mythological narratives and stories as powerful tools to reflect upon sudden changes.¹ At the same time, human reflections include not only the landscape, but also the collectives of beings (flora and fauna)² and extend the boundaries of perception as to include also other entities. If this is not true for those cultures embracing a naturalistic approach, it is certainly true for those communities following other ontological approaches (Descola 2005), or those combining them in a nuanced and creative effort in order to understand the world around us. This is the case of several Himalayan indigenous groups, variously exposed, in contemporary times, to diverse and diversified worldviews: Hinduism, Buddhism, indigenous religions and the already mentioned naturalistic paradigm. It would be unjust, in fact, to describe indigenous knowledge only on the basis of the ‘traditional’ views expressed by their elders and shamans, when we know really well that many are scholarised and in full command of geological, zoological and botanic knowledge

Few years ago, while I was hiking a newly opened trekking route called the Tamang Heritage Trail in northern Nepal, I used to employ the resting time speaking with the local Tamang people about the flora and fauna of the region, nested on the western boundary of the Langtang National Park, on the left bank of the Bhote Khosi. Now and then, I casually inserted questions on local shamans and their practice. Local shamans are known in this part of the country as *bombo*, a word obviously deriving from the Tibetan *bön po* (follower of *bön*), but here used to describe religious specialists engaging with the cult of local and clan-deities, performing healing and exorcistic rituals, with no formal links to the established traditions of Tibetan Yungdrung *Bön*. These religious specialists, in fact, are closer to those known in Nepali language as *jhankri*. One evening, a man pointed to a solitary tall tree, standing in the middle of the rocky slope, surrounded by smaller trees and bushes. “That’s the *ri bombo*”, he said. The *ri bombo*, the ‘bombo of the mountain/forest’, is the equivalent, in Tibetan-related languages, of the Nepali *ban jhankri* (literally, ‘forest shaman’). We could say that the concept of the “for-

1 On the Himalayan landscape and its transformation, see also Smadja 2003.

2 With the rise of multi-species ethnography, several scholars have been addressing critical entanglements between human and non-humans in the South Asian context. Particularly rewarding are, among others, the pioneering works of Jalais (2011) Locke and Buckingham (2016), Govindrajana (2017).

est shaman"³ exemplify, in a sense, the notion of an environment, a landscape, imbued with agency and will, typical of many indigenous ontological views of the Himalayan region. In that case, the tree we were watching was also something else: a potent place and a potent being (Allerton 2017).

It is interesting to note that, among the Tamang people of Nepal, one creation story sung by shamans describes the coming forth of the world in terms of vegetation sprouting, blossoming and flowering:

From the five roots the five tree stems sprouted. From the five tree stems the five branches grew. From the five branches the five buds grew. From the five buds the five leaves grew. From the five leaves the five flower buds grew. From the five flower buds the five flowers grew. On one flower the god Tingi was offered a place. On one flower the water-serpent spirit (*lu*) of the vale was offered a place. On one flower the middle *tsen* spirit was offered a place. On one flower the mother goddess (Kaliama) Damsi Dolmo emerged. With mother Damsi Dolmo father Naru Bön lived together. From the union with father Naru Bön people originated. (Campbell 2013, 118-19)

The vegetal world exemplifies the matrix of a world of entanglements, trees and plants being the interconnective tissue out of which life arises in its manifold animal forms. This is not a metaphor, but a scientific truth, to which the Tamang myth adds an additional level of speculation, associating non-human beings to flowers. Everything is embedded in flux and caught in transformation. The conceptual boundaries of modernity, predicated upon a separation of Man and Nature seem to collapse: as in the famous example set by Anna Lowenhaupt Tsing with her *Mushroom at the End of the World* (2015), we live in an interconnected world. Again, this is not a metaphor.

While this paper incorporates data and reflections from a number of scholars who have been researching the Himalayas, it draws also from my own fieldwork among some Himalayan *adivasi* groups⁴ between 1997 and 2015. The main focus of my research has been shifting over the years, but my errands always had shamanic practices and beliefs at its core.⁵ In recent years, and after the input of the so-called ontological turn, I turned my attention to the implications of indigenous knowledge and cosmovision, and to the meaning attached to it in terms of entanglement with the environment. As the effects of

³ On the *ban jhankri* see also Riboli 2000, 83-90.

⁴ Namely, the minorities of the Hyolmo of Helambu, and the Lepcha people of Sikkim (India).

⁵ See, for example, Torri 2015; 2020; Riboli, Stewart, Strathern, Torri 2021.

climate change seem to increase day by day, indigenous knowledge appears more and more important for the understanding of how to find our place into a complex ecosystem that is now turning tables on us (Riboli, Torri 2021).

Despite being embedded into an essentially Buddhist-oriented worldview,⁶ based on the idea that every sentient being suffers birth, death and rebirth according to the ethical retributions automatically produced by the weight of one's own actions, Tamang and, to a certain extent, Hyolmo cosmovision reveal glimpses of a parallel and partially hidden ontology drawing from what has been defined as an ancient form of *bön* – whose links with the organised Bön are still under investigation and a theme for debate among scholars. In my opinion, the form of popular *bön* prevalent among the Tamang and Hyolmo people, and exemplified by the role and functions of traditional religious specialists known locally as *bombo* or *pombo*, is part and parcel of that wide, yet diversified, ensemble of religious expressions variously defined 'Himalayan shamanism'. While acknowledging the multi-faceted and extremely diversified nature of those religious experiences defined by that expression, I nonetheless like to point out at least few of the traits that legitimate the use of such denomination. Moreover, Himalayan indigenous communities were not equally exposed to the influence of Tibetan Buddhism: in certain areas the influence was minimal, in others non-existing, while in several others we find religious systems variously defined by scholars as *nature worship*, animism, or similar terms.⁷ For the purpose of this paper I will employ the expression 'Himalayan shamanism', defining it as an expression focusing on the role and functions of a specific religious specialist claiming to possess a peculiar relationship with a class of entities (e.g. ancestors, tutelary deities, nature spirits, etc.). The aforementioned relationship explicates itself mainly during ritual events, through non-ordinary states of consciousness (variously defined, in modern scientific terminology, as trance, ecstasy, possession, mediumship etc.). The rituals are often conducted for the sake of expelling illness or misfortune from an individual, or a household. Illness and misfortune are often conceived as the action of non-human entities or witches.

Non-human entities share the cosmos with the human beings and inhabit the same landscape, living side by side. Stan T. Mumford (1989), in his analysis of the Gurung⁸ religious life entailing shaman-

⁶ Like some other *adivasi* groups of the Himalayas, Hyolmo and Tamang people define themselves as 'Buddhists'.

⁷ For example, in the Nepal Census, we find many indigenous religions defined as *prakriti*, translated officially as 'nature worship' (Nepal Census 2011).

⁸ The Gurung, also known as Tamu, are an *adivasi* group of central Nepal. Their religion include shamanic elements, *bön* and Buddhism. On the religious dynamics among the Gurung people see Mumford 1989.

ism and Buddhism, calls for the interpenetration of a pre-Buddhist, or non-Buddhist, layer of religiosity, which he calls the *archaic matrix*, with the later interposition of an ethically oriented Buddhist layer. What he defines as the archaic matrix is the apotropaic, non-soteriological religious dimension that the Himalayan shamans manipulate through therapeutic rituals, exorcisms, divination and rites of appeasement: this kind of intervention reaches out to the daily needs of the people, welfare, sickness, traumatic events, and ordinary economic activities such as hunting, farming, husbandry, building, foraging.⁹

The dimension thus described is what has been commonly defined as animism, here to be understood in Nurit Bird-David terms as a *relational epistemology* (Bird-David 1999). The kind of relation I am going to explore in the following paragraphs refers to the web of entanglements enabling human and non-human life as expressed in the rich mythologies and folklore of some indigenous groups of the Himalayan region. These myths and stories about humans and various non-humans highlight indigenous epistemologies and ontologies, and highlight the background or the ideological premises upon which a kind of indigenous conceptual environmentalism is predicated. On the other hand, it would be simplistic to assume that all indigenous people are oriented towards a kind of environmentalism as intended by international organisations and NGOs. Reality is more nuanced, and the indigenous people of the Himalayas try to find, through their own activists, an alternate third way between social representation, access to services, development and exploitation of natural resources. As it happened for example in other parts of South Asia, indigenous minorities are locked in a debate with the state over the management of natural reserves and national parks.¹⁰

We could easily say that Buddhism, as well as Hinduism, incorporate many themes that are closer to a religious environmentalism of sort. In the present paper, I will not discuss these issues, but I will focus instead on the indigenous religious expressions that, despite being more or less influenced by the religious traditions mentioned above, managed nonetheless to retain a certain autonomy. This relative autonomy is expressed sometimes also in terms of dialectic oppositions

9 It is not by chance that I limit myself to include in the list of economic activities only those related mainly to village or rural life. The urbanisation process, with new lifestyles and economic activities, seems to encourage the shift towards a more established, canonical religion, i.e. Buddhism or other, which is considered more acceptable in a middle-class context.

10 For the specific case of Nepal, see the report of the Lawyers' Association for Human Rights of Nepalese Indigenous Peoples (LAHURNIP) entitled *Assessing the Impacts of Advocacy Initiatives on Indigenous People's Development Agenda in Nepal* (2021). <https://indigenousnavigator.org/sites/indigenousnavigator.org/files/media/document/in-impact-assessment-in-nepal.pdf>.

and adjustments, for example adopting certain customs and refusing others. Among the Tamang and Hyolmo, this parallel stratum of rituality and ideology is subordinated to the Buddhist arch-narratives, and yet retains a degree of autonomy and even conflictuality. Analysing shamanic ritual texts, it is possible to find traces of such conflicts, paired with relics of an ontological approach resting not, or rather not exclusively, on an ethical cosmos that rests on the laws of *karma*, but which is firmly grounded on relational entanglements between human and non-human beings, landscapes and entities.

One set of stories that is particularly popular among the Himalayan Buddhist *adivasi* communities is the one about the taming activities¹¹ of Buddhist masters of the past. If we look at these stories as the consequence of the diffusion of the new religion over the rugged terrains of the Himalayas, we could easily interpret it as the domestication of local deities and other non-human entities and their incorporation into the Buddhist pantheon. What is being domesticated is actually the landscape, of which the aforementioned entities are at the same time essence and manifestation. The Buddhist tantric master and arch-exorcist Padmasambhava exemplifies the spiritual tamer, subduer and conqueror of indigenous deities enabling the diffusion of Buddhism in the new lands. The local deities, once converted to the *dharma*, become the keepers and custodians of the new religion: as a result, for example, fierce, warrior-like mountain deities worshiped by local populations are given a place in the new spiritual landscape thus facilitating the assimilation of the indigenous people into the folder of Buddhism.¹²

The Tibetan Buddhist cosmological view subsumes the local deities into a complex system, based on the notion of *samsara* (i.e. the cycle of life, death and rebirth), which rests upon the idea of *karma* and karmic retribution (i.e. each rebirth is depending on the effects and consequences of one's own action, *karma*), and dependent origination (Skr. *pratityasamutpada*). But these worldly deities (Tib. *jigten pa'i lha*) occupy the world and share it with the human beings, inhabiting diverse zones and exercising power over different areas of influence, possibly defined in terms of ecological zones or niches. For example, we find several gods (Tib. *lha*) associated with mountain peaks, but the mountain is not just the residence of a god or goddess: it is a visible manifestation of his or her body.¹³ Certain regions are considered to be under the jurisdiction of country gods (Tib. *yul lha*), while specific parts of the terrain are under the control of some earth masters (Tib. *sa bdag*). Rocky ridges and hills are the

¹¹ On the figure of Padmasambhava as tamer of demons see also Dalton 2004 and 2011.

¹² See Balikci 2008, 288; Ruegg 2008; Torri 2019.

¹³ See, for example, Tan 2020, 150.

home of fierce and dangerous classes of entities known as *tсен* and *nyan*, while rivers, waterfalls, lakes and subterranean spaces belong to serpentine beings (Tib. *klu*). The result is a complex grid of territorial parcels overlooked by distinct entities. It is exactly because of this that, assessing a similar parcelization of the terrain between diverse gods and spirits in South-East Asia, Paul Mus employed the expression “cadastral religion” (Mus 1933).

So occupied by humans, flora, fauna, deities, and spirits, the land is seemingly overcrowded. As Graham Harvey notes, “the world is full of persons, only some of whom are human” (Harvey 2005, xviii). In such a context, the chances of trespassing into the legitimate domain of others are indeed rather elevate. Among Himalayan indigenous groups, local theories about the reasons for illness, misfortune, disasters etc. are attributed, in most cases, to the disrespect of other fellow living beings. Just like nothing good ever arise from gossip, quarrel and misbehaviour between humans, felling trees, polluting rivers, digging the soil, killing animals indiscriminately are sure ways to invite retaliation at the hands of the various ‘owners of the land’. Shamans are those who are called to compose controversies through rituals, and through the conveying of amends and compensations, according to a set of rules that has mythical antecedents. It is for this reason that I have chosen to analyse some myths and stories, still part and parcel of the shamanic repertoires of the Himalayas, in order to highlight indigenous attitudes towards the environment and the understanding of the mechanics regulating beings entangled in the web of life together.

2 Blood Relations: Multi-Specific Narratives and Cosmopolitics

It is not uncommon in the extended Himalayan region to find examples of a kinship system incorporating the non-human dimension into the folder of human relations. An interesting case is that of the Lepcha people, inhabiting the ridges and slopes of Sikkim (India), some parts of the Darjeeling District of West Bengal (India), and the easternmost part of the Ilam region (Nepal). The word ‘Lepcha’ seems to have been imposed on them by neighbouring groups, as the community prefers to define itself as ‘Rongkup Rumkup’ (children of the mountains, children of the deity). In their myths of origin, the creative agency, called ‘Itbu Rum’, use the uncontaminated snow of the peaks to shape the original couple, placed to live in a secluded place and sacred spot on the lap of mountain Kanchenjunga. The two, a man and a woman, are supposed to live like brother and sister, but soon enough they start to have children, whom they abandon in the forest, for fear of reprisal by the gods. Following this event, they moved out-

side the sacred valley of Mayel Lyang, an event that marks the beginning of Lepcha/Rong society. The seven abandoned children become demon-like (Lep. *mung*) agents of illness, plague and madness and wage a bitter war against their human relatives. It is at this point that the gods create the first shaman, to help humans in their war against the demon-like beings. This conflict is of pivotal importance, since it is from it that, according to the stories and legends, the diverse clans come into being (see Bentley 2008). The clan structure of the Rong society is strictly intertwined with the local landscape, since every clan is related to a snowy peak and a mountain lake. Shamans (Lep. *bongthing*, *padim* and *mun*)¹⁴ intervene several times during the Lepcha life-cycle, as mediators between the communities and their clan-deities, the deities and spirits of the fields, forests and waters, the dead and so on. But it can also be the other way around: certain birds, for example, act as messengers from Mayel Lyang, the land of ancestors, and their appearance mark the beginning of certain activities (hunting, farming, etc.). The recent events (e.g. the 2011 earthquake, the frequently recurring floods, the construction of a system of dams harnessing the Rangit and Teesta rivers) has sparked a revival of the Lepcha's role as custodians and protectors of the environment (see Bentley 2021; Lepcha 2021), renewing the attention for and the spiritual meaning of the sacred landscape.

There is an inherent tension between human communities and the environment they live in. This is expressed in the narratives of conflict and kinship, as we have seen in the case of the Lepcha relations with the demons on one side, and the mountains and lakes on the other. Other Himalayan groups articulate this tension with similar stories.

The story of Gorapa and Serapa, part of the shamanic cycle of Western Nepal analyzed by Gregory Maskarinec (1995), describes the partition of the land between the descendants of two brothers. This partition allocate different species across space, identifying diverse areas over which each species has jurisdiction. Village and fields, forests and rocks, bushes and waterfalls become associated with different beings. Remarkably, the songs sung by shamans tell about those who stayed in the village, i.e. the humans, and how those who moved to cliffs, trees, bushes, swamps and the like became snakes, bees, wasps, tigers, bears, etc. This division is at once what we could term as the great culture/nature divide, but it is a divide

14 There are several words, in the Lepcha language, which describe diverse shamanic religious specialists, each with different abilities, powers and functions. The diverse terms are employed with some fluidity and some regional variations, for example there are differences between Dzongu in Sikkim and Kalimpong in West Bengal. In Kalimpong the word *bongthing* refers primarily to a male ritualist, while the word *mun* indicates a female ecstatic specialist, although certain individuals known as *mun-bongthing* can assume both roles. In Dzongu I encountered more often the term *padim*.

grounded on an original co-specificity, expressed as kinship. Moreover, it posits trespassing as a breach of the rule granting harmony and equilibrium: shamans are called to amend the breaching of the agreements ensuring peaceful coexistence. The tiger place is not the village, the human place is not the forest, the snake place is not the house and so forth. Since beings of diverse species move around, and sometimes prey on each other and on each other's resources, every time a crisis unfolds (in the form of sickness, misfortune or bad luck), it is the shaman's role to identify the cause, and to ritually remember each of the agents involved in the mythic agreement, thus re-establishing more or less peaceful coexistence once again.

The cycle of Abo Tani, the cultural hero of the Apatani, recorded by Stuart Blackburn in the Indian region of Arunachal Pradesh (2008), moves along similar lines. Abo Tani is married to Piisi Tiimi, herself a forest spirit, and sister of Doji, the chief of the forest beings. They share a long house, with two fires, but problems soon arise because the domesticated animals of the one are wild game to the other. Hence, Abo Tani hunting in the forest invariably kills what he perceives as wild animals, while he is in fact hunting Doji's domesticated cattle. The opposite is true for Doji: when he goes hunting, he kills the domesticated animals of Abo Tani. Here the divide culture/nature reveals itself for what it really is for many indigenous ontologies: only a matter of mere perspective, as theorised by Eduardo Viveiros de Castro (1998). Abo Tani and Doji start a bitter conflict, but no one is able to overcome his rival. The conflict can be compounded only after establishing a truce and setting clear rules for living, herding and hunting. It is a frail truce, since, as in the previous case, trespassing is inevitable and leads to retaliations, but at least it ensures the possibility for amendment and the continuation of a more or less peaceful coexistence.

Interesting stories including interspecies relations, kinship and marriage are to be found also among the Magar of north-western Nepal. A good example is the shamanic song of Barchameni (Oppitz 1983). In the myth still sung by local shamans, Barchameni is the sister of a group of seven brothers, who are the husbands of seven witch-sisters. The girl is forced to do all the chores for her brothers and their witch companions, receiving only scraps for food. Out of pity, a cow feeds her with her dung, which magically transforms into rice and lentils. Once discovered, the brothers decide to kill the cow. Before the slaughtering, the cow tells Barchameni not to eat its meat, but to keep its bones and bury them. From the buried bones, eventually bamboo sprouts, and from bamboo, a wild boar arises. The wild boar becomes the protector of the girl, together they engage in collecting medicinal herbs and travel South to sell them. During the trip, the boar resolves to kill the girls' brothers and to marry her. In a final confrontation, the wild boar manages to push the seven brothers

and the seven witches down into hell, and, to this day, the wild boar Galde Vir is one of the helper of the Magar *rama* (shaman). During the healing rituals, shamans still embody Galde Vir, and carry their patients on their back, mirroring and re-enacting the travel of Galde Vir and Barchameni to the South (Oppitz 1983, 204-7). It should be noted that in South-Asia, the South is the direction associated with the land of the dead. Galde Vir, the wild boar spirit, is here envisioned as one of the shaman's auxiliary spirits, helping the *rama* to reach the underworld in order to save the patient from illness and death.

The two animals, the cow and the wild boar, appearing in this shamanic song are very interesting because they appear in many Magar clan genealogies, albeit with different roles in relation to different economic activities, i.e. farming and hunting (Oppitz 1983). Black and brown cows emerge with their human ancestors from a cave. The cave closed just before yellow cows were about to exit, so at present they do not exist in today's world. From the original couple, seven sons were born. In their roamings to find a place to settle, they engage in wild boar hunting, since wild boars were destroying the fields and spoil the harvest. They move from place to place, and find places where to settle. Although many versions exist, Michael Oppitz poignantly remarks the key-features of the origin story. Human beings emerge from a cave. The cave is a strict boundary between the world of the gods and the ordinary human world. Actually, the dividing line does not relate to humans alone. Inside the cave, according to the many versions of this story, we find animals of various colours, never seen in our world: "green dogs, yellow, green and turmeric-coloured cows" (Oppitz 1983, 196). This emergence myth describe the birth of the Magar in connection with the gods: it is the process of stepping out that transforms godly beings into worldly one. Despite the presence of this overarching theme connected with the cave theme, in some versions we find a supernatural wedding between a human girl and a god: in this specific case, a nocturnal lover visits a girl, and her parents, in order to discover the identity of her lover, ask her to tie a thread to him during their meetings. Following the thread, they reach a passage behind a waterfall, leading, again, to the cave of the gods. Thus discovered, the god is forced to take care of his human lover, and to gift her with yoke and oxen, and agricultural utensils (Oppitz 1983, 192-3).

The same complex pattern of interactions is found among the Thulung Rai of Nepal, whose mythological materials were analysed at length by Nicholas J. Allen (2012). In particular, for the purpose of the present paper, very relevant are the stories about the creation that revolve around the figure of Miyapma, a female being from which different species originate. The character of Miyapma emerges, according to various versions of the myth, from another being born out of a lotus blossoming among the moistened leaves accumulated by

the wind on the surface of a primordial lake.¹⁵ Seeking a husband, Miyapma sends two birds, named Jigengma (a *Prinia polychroa*) and Kekuwa (a hawk), to arrange a meeting with the planet Ruwasila (Venus). Ruwasila goes hiding, and in his place the messenger birds find the goitrous Khomda (Jupiter), who accepts to follow them down to earth. When Miyapma sees him, she hid herself, not wanting to marry someone with a goitre. Offended, Khomda leaves, bringing away the grandmothers of the waters, and leaving the earth in a state of drought. But before leaving, he left his urine/semen in a hollow tree trunk or a drinking vessel made of leaves. Thirsty, Miyapma is forced to drink and becomes pregnant. She then gave birth to different species, and the myth especially mentions the mountain thorny creeper, the valley thorny creeper, a tiger, a bear, a monkey and Mini Rai (a human being). Despite being brothers, Tiger and Mini Rai always quarrel: being both hunters, they constantly chase each other. One day, the tiger, hunting in the forest, kills her own mother Miyapma. Mini Rai sends the two other brothers to bury her body, but in fact they eat it. This episode of intra-familial cannibalism marks the end of the extended family and they disperse in diverse directions (Allen 2012, 23-42).

At the base of this familiar conflict, after which the brother species separate themselves, we find dietary customs: meat eaters, grain eaters and omnivorous. The place allocated to each and every of them, instead, seems to respond to ecological adaptation: the various versions of the myth indicate that the monkey goes southwards, the bear northwards, and the tiger can move across, while Mini Rai stays in the middle (Allen 2012, 42). It is not immediately clear why two varieties of thorny creepers are included in the family, but it is nonetheless interesting to note that this multispecific entanglement includes not only animals but plants too.

Incidentally, we find tigers and human beings entangled in a story collected by C. de Beauvoir Stock (1925). According to this story, two Lepcha brothers, Yong-rumbo and Yok-gnibu, were famous hunters, but they could not find wives, because everyone was afraid of their sister, Naremnom, who was married to a tiger, named Tung-bo, and she was a man-eater herself. The tiger had a brother too, named Renlok-bu, who was a snake. Despite their prowess and skills, the two hunters were not able to chase down Tung-bo, so they asked for help to the bamboo plant. They promised to give bamboo a relevant role

15 This sequence of events could possibly be a reframing of the Hindu myth of the god Vishnu sleeping on the primordial waters. It is in fact told that from his navel a lotus springs, and from the lotus the god Brahma is generated. Brahma then proceeds to create the world anew. At the end of the cosmic cycle, the world is to be destroyed by the god Shiva, with fire and water. After a period of quiescence, the whole process starts again.

during the rituals performed to honour the gods, and then the plant agreed to block the tiger on its tracks. Finding the bamboo blocking the trail, Tung-bo the tiger asked it to leave or be crushed, and upon its refusal jumped on it. A bamboo splinter pierced the tiger and killed it. The two brothers skinned Tung-bo and went back home. At the sight of the skin of her husband, Naremnom turned into a bird and flew to the jungle. As the story goes, people can still hear her crying at night, and her cry is a bad omen for those who hear it (365-6).

In a completely animated environment, conflicts seems to be inherent. But that could be also a reflection to explain the inescapable misfortunes and sorrows characterising human (and probably also non-human) life. A human behaviour surely triggering conflict is, in all relational epistemologies, greediness. While illness could be sparked by the occasional and unintentional acts of polluting a river, felling a tree, digging a trench thus offending or harming the related non-human entity, greediness invariably invites disaster. Hunting too much, collecting too much, cutting trees without reason, all these actions are seen as inherently ominous. In an economy of scarcity, surplus is greediness, and there is a price to pay. An example of this could also be found among the *bön* texts translated by Samten Karmay (2010). These texts were probably employed by *bön* ritual specialists during rituals of appeasement of the non-human entities called *nyen* (Tib. *gnyan*), a class of beings associated with natural spaces. In the text, each class of beings is given a place to live in, and skills to ensure its survival, but human beings out of greediness are tricked into believing they can exploit other beings and resources beyond measure. In a pivotal passage, the humans proclaim their greedy intentions with unequivocal words:

I will kill hundreds of thousands of the beasts of the white snow mountain.
I will kill hundreds of thousands of snow cocks and grouse of the blue slate mountain
I will kill hundreds of thousands of beavers and otters of the rivers.
I will cut the trees of the *Nyen*.
Dig up the stones of the *Nyen*.
I will plough the land of the *Nyen* as my field.
(Karmay 2010, 63)

The whole of the non-human, then, rise in battle against the humans: storms, plagues, illness, animals and spirits attack them without mercy, until the human beings are forced to beg for a truce, and, with the help of a *gshen*, i.e. a ritual specialist, which can be defined pos-

sibly as a *bön* shaman,¹⁶ make an agreement that enables a more or less smooth coexistence.

But conflict is just one among the possible cosmopolitic relations. In a Tamang creation myth, sung by the *bombo* during healing rituals, a different trope appears. Among the many beings of the creation, the golden chicken was created immortal, but he was feeling sad because he saw many people struck by illness and death, so he approached the god and asked the permission of dying on their behalf (Mastromattei 1988, 88-90). This is a mythical explanation for the ritual sacrifice of a chicken during shamanic rituals, performed in order to save a human life, according to the logic that a illness is in fact a spirit consuming the patient life-forces and internal organs, devouring flesh and bloods. It is a substitution ritual in which the life of the suffering person is spared through the offering of another life. We could see that this kind of rituals have a parallel in the so-called 'ransom ritual' of Tibetan Buddhism, which are based on the same logic, but take the substitution a step further through the use of a *torma* (Tib. *gtor ma*), an effigy made of dough.

During my first fieldwork, among the Lepcha people inhabiting the hills around the town of Kalimpong, I witnessed for the first time the sacrificial killing of an animal.¹⁷ The local ritualist, a *bongthing*, addressed the deities of the clan and the ancestors in front of a temporary altar. The ritual, I was told, was the *Chu Rum Faat*, (literally 'offering to mountain deities'). The altar was built behind the house, facing the mountains. It consisted of a bamboo pole, flanked by two arrows. The vertical pole represents the mountain peak, the two arrows its flanks. In front of it, on a tray, several effigies made of dough represented the mountain and lake associated with the clan, other mountains, the ancestors. On a side, the dead and other potentially noxious spirits. An assistant kept a red chicken close by. After an enumeration of deities and spirits, places and planets, winds and clouds, the *bongthing* sprinkled the chicken's head with water and rice, carefully looking for its reaction. At once, the chicken was taken away and sacrificed by the assistant. After a while, it was taken back to the altar: some of its flesh and bloods are given to the spirits of the dead

16 The notion of *bön shaman* was recently employed by Toni Huber (2020) in a work devoted to the study of fertility cults of Bhutan and the eastern Himalayas. In the recent past many Tibetologists and scholars of *Bön* have rejected the notion of shamanism as useful to explain what is defined, in fact, as the fifth school of Tibetan Buddhism, or an organised religion of pre-Buddhist Tibet. While the debate is still open, we cannot ignore the fact that many shamanic religious specialists of the Himalayas (e.g. the *Hyolmo* and Tamang *bombo* or *pombo*) define themselves as followers of a kind of *bön* unrelated to its organised, monastic form, i.e. the *Yungdrung Bön*.

17 The rite was observed in a village near Kalimpong, during the month of October 1997.

and the noxious agents. Its body, filled with rice, was consecrated to the mountain of the clan and the ancestor's deities. During the offering, it became clear that the body of the chicken was not only offered, but, symbolically, it became the mountain. In describing the body of the victim, he used expressions like "its wings are your arms, its legs are your legs, its crest is your ridges, the rice on its chest it's the mountain peak...". While the chicken was addressed as the mountain of the clan, the *bonghting* described also the connections between the mountain and the sun, the moon, the stars, the rivers, the slopes, the trees and flowers, up to the sacred places surrounding the village. The chicken, I was told later, was selected at the beginning of the year. Consecrated to the clan-deity of the mountain, it protected the village by bearing upon itself misfortunes and illness. Its consecration to the mountain-deity empower it, and through its sacrifice the pact between the people and the clanic god is renewed. The mountain, as the clan god, has the power to regulate relations between the beings inhabiting the region. It controls rains and grant bountiful harvests, or it can release drought and sickness. In a relational context, an animated environment reacts to human actions.

3 Conclusions

Despite the degree of intrinsic diversity characterizing the indigenous minorities of the Himalayan region, the studies presented in this paper demonstrate also a certain homogeneity in the way different ethnic groups of the region appreciate, understand and conceptualise the world and the way they live in it sharing space with other species. The Himalayan region is extremely rich in terms of biological and cultural diversity: not only it encompasses several nation-states and diverse ecological habitats, but it is also internally diversified. When it comes to indigenous communities, we must consider the highest level of a diversification that include ethnic, linguistic and religious differences. For the purpose of this paper, I have limited myself to the analysis of some ethnographic materials dealing with some groups inhabiting the Central and Eastern Himalayas. Among these, in particular, I chose to focus on Tibeto-Burman groups. Yet, it should be stated that some approaches, understanding and feelings towards the environment show continuities well beyond the central Himalayas. Studies on the Western Himalayan groups, and on the Hindu Kush region, show similarities in ritual techniques and ideas of a relational cosmos.¹⁸ The idea of a relational cosmos, and modified states of consciousness as a key access to it, represents a significant

¹⁸ For a complete overview of religions of the Hindu Kush region see Jettmar 1975.

trait of continuity across linguistic, cultural, religious and political barriers. Indigenous ontologies postulate, at least through practice and discourse of shamanic religious specialist, a web of connections among heterogeneous subjects (de la Cadena 2015, 283). Such heterogeneous ensemble is not human: the assemblage of life, the organic and the inorganic, the visible and the invisible, memories, energies, forms, ideas, each and every part contributes, has agency. I have chosen to focus on myth and related forms of narratives, such as shamanic songs and ritual texts, since they show a deep and intimate confidence with those ideas and approaches characterising concepts that only recently, and through the ontological turn, surfaced in a global discourse about life on the planet, the Anthropocene, and climate change.

To look at the entanglement of life as a reality, it is something new for a certain kind of approach privileging the crude exploitation of resources and beings (animals, both human and non-human). While reading or listening to shamanic songs dealing with the times of creation, something is really striking. The diversifications of diverse species, their conflicts for resources, the continuous state of metamorphosis and fluctuations, seemed certainly primitive to ethnographers of the 19th and 20th century. Reading it all again now, it looks extremely contemporary. And yet, if a truth really was contained in mythic narratives, it was there all the time. As Ludwig Wittgenstein rightly remarked:

there can have been no reason, that prompted certain races of man to venerate the oak tree, but only the fact that they and the oak were united in a community of life. (Wittgenstein 1993, 139)

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General Introduction to Environmental Humanities in India The Ecocritical Discourse in Hindu Literature

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Abstract The article offers a general overview of the ecological debate and Environmental Humanities in India. After an introduction on the legacy of Gandhian ecological thought and contemporary literature, the essay focuses on the most discussed themes of the Indian classical tradition, with particular references to sacred texts (Vedas, Puranas, the epics). The sum of this knowledge is placed on the recursive perspective of Indian time: as *yugas* change, new structures of social life arise, reformulating society and its environment in a more holistic and sustainable way. This would be possible without ever denying the responsibility we all have in maintaining that personal empathy towards the environment that is reflected in Indian classical texts.

Keywords Environmental Humanities. India. South Asia. Forest. Environmentalism. Indian literature. Anthropocene.

Summary 1 The Background of the Ecological Debate in India. – 2 From Banyan to Blue Antelope: The Mythical Hindu Ritual Universe. – 3 The Enigma of the Khāṇḍava Forest and Animal Empathy. – 4 Is Kali-yuga the Anthropocene? – 5 Conclusions: A Recursive Fire.



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1 The Background of the Ecological Debate in India

In terms of eco-critical debate and more generally in Environmental Humanities, the Indian Subcontinent has been a very lively scenario in recent decades. Various perspectives ranging through the fields of the so-called environmental literature, environmental philosophy, environmental history, science and technology studies, and environmental anthropology are evident here too from the emergence of all the intrinsic critical aspects of the Anthropocene: hence the concerns for climate change, emissions of greenhouse gases, global pollution or, more generally, any imbalance in the ecological field caused by crossing that thin shadow line constituting an irreversible exploitation of the territory. In this sense, India is particularly interesting since it is a young nation, in full economic, industrial and infrastructural development, but which is placed in a strategic position in the Asian quadrant both in geopolitical terms and for the immense size of its resources – largely untapped yet.

In reality, a certain ecological discourse is well known from the years leading up to independence. A certain part of India considers its ecologism today the fruit of Gandhian economic thought. Mahātmā Gandhi (1869-1948) is certainly known for his *satyāgraha* campaigns, non-collaborationism and socio-economic self-sufficiency, which aimed to put the British imperial economic system in check, also through the boycott of English and foreign products. This system however was a kind of global economy for the Commonwealth in colonial times. But behind this there was a substantial awareness that the industrial revolution, technological progress (European in this case), had contributed to the subjugation of poorer countries in this sense. The Gandhian ideal was therefore essentially based on the observation of the socio-economic equilibrium of the village, hoping for a possible return to that. The Indian village had always been a sort of paradigm of the real Indian social fabric, with exceptions of course, but at least it was so for what concerns the agricultural hinterland (Fisher 2018, 135 ff.; Shinn 2000, 236). In the village, a gradually disappearing reality indeed in the late colonial period, there was a delicate balance of subsistence, a division of labour, the enhancement – if not the centrality – of the female role, an equilibrium with the surrounding environment. The colonial Raj would therefore have uprooted this ancient asset of values, replacing it with the introduction of monocultures, control over raw materials, exploitation of resources, army implementation, and the imposition of public finance through a pachydermic bureaucracy. But above all from this perspective, emphasising industrial development, the paradox is that man's work would have been turned into labour, while the women's work, fundamental in the economic structure of the village, was devalued, as it could not be monetised. It is also interesting to note that

the return to a village economy advocated by the Mahātmā was not shared by everyone in India, especially in a period in which Indian politicians, writers, intellectuals read in technological progress, and in particular in the development of heavy industry, the way to development, modernity and social well-being. What for many remains a utopian vision, a sort of decadent Gandhian romanticism, however at the dawn of independence it becomes part of the so-called 'four pillars' of Indian economic thought.¹ It is also true that apparently, among the various disciplines, in the 1950s the modernist vision took over, inspired by the Soviet model of the first prime minister Jawaharlal Nehru (1889-1964). But it should also be considered that various ideals of financial management that at the dawn of independence were sketched at an embryonic level, sooner or later, in the following decades will be largely re-evaluated and integrated into the new routes of Indian economic policy (Boillot 2009). It must also be clarified that that return, advocated by Gandhi, to the idyllic dimension of the village basically consisted in imagining a society that was all in all simple but aware that its subsistence would be based on consumer goods and therefore on agriculture in the first place. Based on this premise, the principle that today is defined as sustainability, or more generally as sustainable economy, based on the resources of the territory, is developed. However Gandhi would seem not to have had time to articulate a complete philosophy in this sense, due to the major events resulting from the political transition at the end of the Second World War and above all because of his own murder. But the work of a lifetime, in the ecological sense of the term, would have been collected by Joseph Chelladurai Kumarappa (1892-1960) an activist, faithful collaborator of the Mahātmā, who was considered the custodian of his economic thought, as well as the one who contributed to articulate and expand the doctrine of non-violence (which we will discuss below) and the environmentalism of his master. Considering that child depends on the mother like the human being depends on subsistence agriculture, he developed that concept of 'maternal principle' that was based on general principles such as far-sightedness, care for others and respect for Nature (Kumarappa 1951).² The discourse is interesting since it forms the basis of suc-

1 At the time of Independence Gandhi's vision was opposed to that of Nehru inspired to a certain extent by the Soviet model and protectionism. In addition to these, there was a communist model looking at the countryside with a perspective not so far from the Maoist China, and the fourth proposal consisted of the famous Bombay plan, which in short can be defined as a capitalist model inspired by eight great Indian industrialists.

2 The classic example is the Chipko movement of the 1970s against deforestation in today's Uttarakhand region. The village protest culminated in the predominance of female participation, so much so that women hugging trees have become the symbol of the ecological movement of those years (Guha 2000).

cessive environmental movements in India, but also of a large part of Indian ecological feminism.

In fact, even during the British Raj, there are historical episodes in which the British seem to be aware of the importance of Indian ecosystems and above all of the preservation of forests as a resource (Bandopadhyay 2010; Guha 1983). The complex set of laws on the protection of this heritage, however, impacted with a more general reality consisting of exploitation of the social fabric of the territory, land expropriation, land displacement and other aberrations of the period of colonial rule. But even before the long wave of postcolonial environmentalism closer to contemporaneity (Kochar, Khan 2021), some authors had highlighted the ancestral relationship between man and nature on the child-mother model, in particular through the social novel where once again the complexity of the village was the real protagonist of the story. In Hindi literature, for example, I could mention Dhanpat Rai 'Premchand' (1880-1936) with his literary social realism, or Phanishwar Nath 'Renu' (1921-1977) who, through the social novel focused on the village, denounced the conditions of backwardness of the countryside, the relative harsh living conditions, the existential dramas, and the dark side of the caste system. However, the set of festive voices, the dimension of collective participation in a sort of folkloric wealth, the songs, the hymns, and the rites as a whole translated an ancestral consubstantiality of the human community of the village with its surrounding territory (Wesser 2021). Like the baby who does not perceive the difference between his body and that of the mother, in the same way the Indian village boundary can be metonymically understood as the womb of the mother, for which the community has a deep sensory bond, even more than affective.

I cannot say, right now, if Gandhi was referring to authors of his time or if they were inspired by him, probably both aspects are true, however it is important to consider the crucial historical moment in which this debate develops. It is a time of extreme fervour in which intellectuals and social thinkers strive to imagine an ideal future society: it is a time in which any future configuration seems to be possible. With independence, a new nation is born and in the ongoing processes of state making and nation building it is now possible to find an ecological root that will perhaps not be the prerequisite, but at least the background, of a contemporary debate on Environmental Humanities.

Coming back to eco-feminism, about India it is impossible not to mention Vandana Shiva, who is an Indian scholar today renowned in the world for her environmental campaigns, and the many writings on sustainable agriculture and against globalisation (Mies et al. 2014; Shiva 1988). On the other hand, there are many Indian thinkers today who have animated the global debate on environmentalism; these are journalists and activists who fight for the environment and hu-

man rights (Palagummi Sainath, Bulu Imam, Anupam Mishra, Satish Kumar); zoologists and botanists (Valmik Thapar, Saroj Raj Choudhury, Jayanta Bandyopadhyay); successful writers of fiction and non-fiction (Amitav Ghosh, Claude Alvares, Sanjay Singh Yadav, Prerna Singh Bindra, Hemendra Singh Panwar) and many others. But the aim of this article is not to deal with the work of these authors, perhaps already very well known, but rather to explore the recent impetus to the eco-critical analysis of classical Indian literature. A rundown of the relevant elements in this sense in the most ancient Hindu religious tradition and in the epic will therefore be proposed: without presuming to be exhaustive, I will at least try to convey the depth of the lively academic debate on these topics. In particular, I will try to investigate the complex myth of the Khāṇḍava forest, reaching some final conclusions about a possible correspondence between what is now commonly called the Anthropocene and the theory of *yugas* and the end of times in Hindu doctrines.

2 From Banyan to Blue Antelope: The Mythical Hindu Ritual Universe

The ecological element and the sacredness of the territory emerge predominantly from the great harvest of Indian literature. Even before the advent of Buddhism, before the middle of the first millennium BC the ancient kingdoms of *Āryāvarta* had evolved and flourished: these were the territories where the first Arya tribes or the proponents of the spread of the Hindu tradition were presumed to have settled in a post-Vedic period. The sixteen main kingdoms extending in northern India, called *mahājanapadas*, constitute the contours of a territory that is more mythical than determinable from a historiographical point of view, which however is deeply linked to the attributes of its territory and its environmental characteristics (Kapur 2011; Van Horn 2006). This is the theatre of the deeds of the heroes of the epic, but its mapping embodies, in the centuries to come of Indian history, the ancient root of the Hindu tradition or at least its overarching synthesis. The territorial nucleus of the great empires, for example, was compared to a banyan (*Ficus benghalensis*) with strong roots in the more or less large cities that developed in the Gangetic plain, in the sacred places and in the rituals that were performed here. A solid and equally impressive structure articulated through forests, rivers, mountains, as well as the celestial dimension above them in which Hinduism had set its mythical and ritual universe (Ludden 2002, 30-1). In fact, the banyan has those characteristic roots that seem to intertwine infinitely along the trunk and spread out like an umbrella along the branches without interruption:

a clear example of multiplicity or complexity in unity.³

This period, late-Vedic according to a literary measure, corresponds with the expansion of sedentary agriculture in the Indo-Gangetic *doab* that spreads across the alluvial plain towards the current region of Bengal. The surplus accumulated by an organised agricultural system gave impetus to an extraordinary urban development;⁴ thus the artisan guilds, the mercantile castes were born.

In summary, each region developed its own specific relationship between man and environment related to the characteristics of the territory and the possible relationship of exchange and absorption of pre-existing indigenous cultures and their pantheon. A growing spatial understanding of Indian geography is articulated in this phase and in subsequent sacred texts. They also reflect a society that is slowly adapting to the specificity of the subcontinent's ecosystems by identifying with an ecologically specific region (Fisher 2018, 51-3).

Previously, however, the Hindu tradition boasts the knowledge of a complex cosmology: the earth is like a disk, with the sacred mount Meru in the centre and four continents surrounded by oceans that extend along the four cardinal points. This is the mythical continent of *Jambudvīpa* that, from sacred texts, filters into indigenous folklore and cosmogonies of various places in mainland India and the Himalayas. This idea regarding the structure of the Subcontinent ends up conforming as a single bounded geographical entity in which the concept of the development of Indian space takes place in particular through animal and vegetable forms. The importance of the mountain in recalling the centre of the world should be mentioned: the Meru has a clear axial symbolism; the mountain communicates with the three-worlds but is itself covered, inhabited by all kinds of humans and non-humans, trees, animals, divinities, spirits and demons. Furthermore, the cavern, intended as a natural underground chamber in a mountain, hillside or cliff, is characterised by a strong religious symbolism. The cave, like a womb of mother earth, is a prelude to a metaphorical journey of death or *katabasis* and rebirth from the bowels of the earth. In a spiritual sense this symbolism is transposed into each of the thousands of temples dotting the geography of India, which with their rising towers (*śikhāras*) recall the sacred mountains that nevertheless contain the *sanctum* (*garbhagrha*, lit. womb; interior [containing/within - foetus/embryo] - room) within them (Kramrisch 1976, 169-71).

3 It is no coincidence that this tree was chosen as the logo of the VHP, the Vishva Hindu Parishad (Universal Hindu Council), an Indian right-wing Hindu organisation based on Hindu nationalism

4 Scholars define it as second urbanisation since the first phase is commonly understood as that of the Indus Valley civilisation: the relationship with the environment and ecology of this civilisation is extremely interesting but goes beyond the present overview of Hindu literature.

Moreover *Jambudvīpa* is literally the land (*dvīpa*) of the *jambu* or rose apple tree (*Syzygium cumini*) here evidently a symbol of sweetness and abundance due to its juicy fruits. At the same time, the richness of the *Āryāvarta* is evidenced by the large number of wild animals, called *mṛga*, a term that often in subsequent literature refers to the cervids⁵ or the Indian black-buck antelope (*Antilope cervicapra*). Although in India there is a tendency to backdate these conceptions to the mists of time, as these are notions considered relevant to the religious tradition, it must be observed that the Vedas and the very first Sanskrit literature do not mention the *Jambudvīpa* (Ray 2017, 352) nor mention is made of it even in the systematisation of the Sanskrit grammar of Pāṇini (about VI-IV century BC). It appears rather in the Buddhist canons and in the *Arthaśāstra* (Olivelle 2013, 462) and then widely in the Puranic literature. However, it is still plausible that a reminiscence of a once agro-pastoral civilisation reverberates through the positive perception of an ancestral wealth of a hunting and gathering territory. And for reasons of space I need to stop here in the awareness that Buddhist environmental ethics and the related understanding of ecosystems is a truly complex issue from an exegetical point of view (Deleanu 2000; Sahni 2008). The same goes for the first Hindu cosmologies. In summary, however, it seems interesting to observe that the concept of the antithetical principles of the domesticated and the wild (or tamed/untamed) so discussed in anthropology (Lévi-Strauss 1962; Descola 2005) can also be found in a nutshell in ancient literature. The ancient Indians divided the land into village (*grāma*) and wilderness (*aranya*). By analogy, humans and non-humans who lived in these two areas could be defined as domesticated (*paśu*) and wild (*mṛga*). This sort of line geographically demarcating beings and their environment unfolds a very complex normative categorisation of relationships, interactions, social hierarchies and dietary norms that see prey and predators, carnivores and herbivores, courtyard and forest animals opposing each other. A great abundance of references can be traced from the cosmogonies of the Vedic hymn of the *Puruṣasūkta* (Ṛgveda 10.90) to the tales of the *Pañcatantra*, of which the oldest redactions date back to the first centuries AD (Olivelle 2011, 385).

Yet between the wild and the domesticated there is not only opposition but also a certain correspondence, some elements of the former fall into the latter and vice versa. The village, the city, the sacred place (see the Sanskrit *kṣetra* 'field'), when it exhausts its sacredness,

⁵ It is commonly the *sambar* (*Rusa unicolor*), for antelope there is also the Sanskrit *epa*. The well-known sacredness of the bull/cow, an ancestral legacy of Indian religiosity, is juxtaposed by the wild counterpart of this animal, namely the *nilgau* (*Boselaphus tragocamelus*) whose sighting is still a good omen and a sign of a healthy territory today.

recursively return to draw it from the depths of the forest. The images of the gods, the sacredness of the relics, the updating of doctrinal issues seem to somehow reside in the ancestral nature of the woods surrounding the human dimension (Thapar 2001). In fact, if the ancient inhabitants of India classified the woodlands by dividing marshes (*anūpa*), unhealthy and unstable places not suitable for the construction of settlements, from dry scrub forest (*jāṅgala*), which could be cleaned to make room for villages and crops, there was also the concept of a sacred, ancestral and inviolable forestland (*āraṇya*) that symbolised the purity of the territory. The Indian jungle is therefore a dark, mysterious place, potentially dangerous due to the presence of predators and evil spirits, but only for the layman, the profane uninitiated, who cannot interpret its sacredness:

Forest were also sites of sacred power, where religious explorers in the optional third *ashrama*⁶ renounced society to form an Ashram ('sylvan hermitage or retreat') and experiment with powerful but potentially dangerous ideas and practices. There, thinkers and philosophers considered the nature of *ātman* ('self') and relationship with Brahman (the Universe as an undifferentiated unity), producing the Sanskrit: *Āraṇyakas* ('forest books') *Upaniṣads* ('esoteric books'). These texts, which most scholars date c. 900-500 BCE., later were labeled 'Vedanta' or the end, culmination, or the goal of the *Vedanta* ('the end, culmination, or goal of the Vedas'). (Fisher 2018, 55)

But it is in the *Rāmāyaṇa* indeed, one of the two most famous epics of Indian literature, that it is possible to find perhaps the oldest treatise on botany of the Subcontinent (Lee 2000). The dating of the poem's original core is still unknown: some scholars are inclined to place it between the 7th and the 4th centuries BCE, while its completion is ascribed to no later than the 3rd century CE; however, the saga of Rāma and companions boasts countless versions and regional reinterpretations (Richman 1991).

The original narration of the mythical events is attributed to the poet Valmīki who, with his elegant stanzas, his refined and erudite style, has managed to intertwine together, through the admirable

6 Here Fisher clearly refers to the *āśramas*, or the four stages of man's life, which everyone is presumed to go through according to a *dharmic* perspective of existence. After the status of student (*brahmacharya*) and that of head of the family (*grihastha*), the third is the *vanaprasta* or the one who retires to live in the forest (the last is the *saṁnyasin* or renouncer, who ritually prepares himself for *post mortem*). Each of these stages has its own importance compared to the others, but the third presupposes the separation of bonds and duties towards the family and society, preferring a life of asceticism and introspection that is the culmination of the experience of a life lived to the fullest.

deeds of the heroes, a treatise on geography, a saga in which today many scholars distinguish historical elements and finally a delicate account of forest ecosystems. The forest is in fact the constant background of the plot and above all has a variable feature that seems to influence the inclinations and moods of the characters, as if there was a sort of human / non-human-plant empathy (Rangarajan 2009). Depending on whether this is an idyllic, pleasant or rather harsh, wild place, inhabited by saints, ascetics, animals or demons, the forest has characteristics that are well suited to the human soul: calm (*śānta*), sweet (*madhura*), angry (*raudra*) or fearful (*vībhatsa*).

The various forests acquire different names depending on the events that take place there. To give some examples: *Citrakūṭa* is the retreat place of Rāma during exile; *Daṇḍakāraṇya* is also a forest, abode of demons, in which Rāma traveled together with his relatives visiting the hermitages of sages; *Pañcavaṭī* is the place of exile where his consort Sītā was kidnapped; *Laṅkā* is the evergreen lush forest where she was taken and the *Aśoka Vāṭikā* (sorrow-less garden) is the place separated from the palace of the demon Rāvaṇa where she lived during her captivity. Here Hanuman came to see her bringing the message of comfort heralding the coming of the saviours, but he is also linked to the forest of *Kiṣkindhā*, where he met Rāma for the first time, near Lake Pampā, and to the sacred forest of Mount Dronagiri to which Hanuman flew in search of the miraculous Sanjīvanī herb.⁷ Also interesting is the process of geographic localization of these mythical places that are gradually structured in the real geography of the Subcontinent (Sinha 1999). From the island of Sri Lanka to the Himalayas, along the sacred rivers a universe comes to life made of lilies, lotuses, vines, known and other mysterious herbs, aquatic plants, shrubs, edible and inedible fruits in a catalogue that reaches little beyond under two hundred names not yet all precisely identified. This abundance develops in different types of ecosystems that we could mainly define as tropical (dry or moist) deciduous forest, to which, however, are added evergreen jungles and Himalayan alpine landscapes in which the forest is as 'found in heaven': a clear allusion to an ecosystem that it is a metaphor for a journey of spiritual transcendence.

⁷ While these names are located in the forests, and seem to influence their characteristics, they are not the names of the forests themselves, except *Daṇḍakāraṇya*.

3 The Enigma of the Khāṇḍava Forest and Animal Empathy

The poem of the *Mahābhārata* with its nearly one hundred thousand verses (*śloka*) can be considered the largest epic work ever composed in the history of mankind. Even those who are not accustomed to indological matter, the saga of Kṛṣṇa, *avatāra* of the god Viṣṇu, and his fellow Pāṇḍavas, among the main characters of the poem, is certainly known. The matter is rather dense since around the primitive core, which most scholars are inclined to date around the fourth century BC, an immense amount of heterogeneous, narrative and doctrinal elements have been gradually added in the following centuries. Even from the point of view of a new eco-critical exegesis, the ecological material, the references to the environment and to the territory, surrounding the main narrative plot about the great war fought between two branches (Kauravas and Pāṇḍavas) of the king Bharata's descent, are so varied and numerous that a single article could not even constitute mere cataloguing (Narayan 2001).

In this wealth of literary elements, however, there is an episode that has recently become a central theme of difficult interpretation in Environmental Humanities in India, in particular because it represents a dramatic event whose symbolism is still difficult to explain. This is the fire of the Khāṇḍava Forest, an ancient, lush, ancestral place running along the banks of the Yamuna River. In the epic it is said that Kṛṣṇa himself, together with Arjuna, one of the heroes, would have burned it, carrying out a great massacre of trees, vegetation and killing every form of life living in the forest (*Mahābhārata, Ādiparvan*, chapters 214-25). The region was identified by Indian scholars as more or less coinciding with the Delhi area, which is considered to have been built in the same place as Indraprastha, the capital of the Pāṇḍavas. So if the destruction of the forest could be read as an extreme sacrifice, terrible but necessary, for the construction of the future capital, the whole episode could be interpreted as a founding myth. As mentioned above, the theme of the domestication of the territory, the comparison between the domesticated and the wild is quite common in anthropology; it is reflected in many founding myths of the oral cycles of the indigenous peoples of India. Even in the Islamic world, particularly in the Mughal era, this motif is one of the most recurring ones in literature or in the marvellous medieval miniatures. The emperor is often portrayed at the head of his army or on horseback on an elephant while wading rushing rivers or in large hunts where the natural element seems to be the main subject depicted. These views symbolise the domestication of a wild territory, but also translate the political metaphor about the extension of imperial prominence and authority in an indomitable region. So in the *Mahābhārata*, the conquest of a territory, which theoretically in the literary tradition has its roots in the foundation of the ancient

kingdoms of India (*mahājanapadas*), would be transposed into the epic description of the forest fire. This is the prerogative of a transformation of a wild and uncontrolled environment into an agro/pastoral land, which is in turn a prerequisite for urbanisation dynamics.

However, this transition seems to be anything but painless and its reading is very complex. In fact, the epic tells us in minute detail of the great suffering and terror experienced by all the creatures of the forest. Not only are trees set on fire, but aquatic, land and air animals will also die by the thousands. It is no coincidence that reference is made to the boiling water of the lakes and the darkening of the skies. It would almost seem that there is an intentional reference to the three worlds:⁸ a catastrophe that leaves (almost) no survivors. Even Indra, lord of lightning and storms, king of the uranic dimension and of all the gods (*devas*), moved with pity, tries to save the forest and its beings by pouring torrential rains into it. Agni, the god of fire in India, is in trouble and therefore equips Arjuna and Kṛṣṇa with magical weapons capable of incinerating the surrounding environment, in order to complete this immense sacrifice. But the power play staged in the epic indicates a non-linear path. In fact, the heroes, having completed the tragic work, are seized with remorse for the suffering occurred and for having caused so many deaths.

The theme of remorse seems to be the key to the correct interpretation of the myth. In fact, the heroes were approaching the Khāṇḍava Forest not in order to destroy it, but this need arises after meeting Agni, disguised as a Brahmin. This afflicted Brahmin, at the end of his strength, meets the heroes and asks them for help in appeasing his hunger: at this juncture Arjuna and Kṛṣṇa solemnly promise to help him. Only later does the Brahmin reveal himself to be Agni, the Fire, claiming to have such a great hunger that it cannot be extinguished except by swallowing the entire forest and its inhabitants. According to some scholars (Sharma 2018) this could be a later interpolation and, moreover, there are miscellaneous references to forests on fire in Sanskrit literature. But here it is as if the author could not on the one hand accept the merciless massacre of the creatures of the forest and, on the other hand, he could not even accept that this was done by heroes. The episode of Agni's disguise justifies the heroes' final remorse. They do not carry out the massacre by their own will, but because their rank imposes the sacredness and respect for the

⁸ There is an explicit reference to the Nāgas, who are understood as indigenous peoples of the forest (there are still indigenous nations in the Indian Northeast that claim this same name). However, in Indian mythology the *nāgas* (lit. snakes) are half-ophidic and half-human beings, divine or semi-divine, inhabiting the Pātālas or a chthonic netherworld. The nature of these beings is subtle, so from an ontological perspective the destruction of the forest seems to involve humans, non-humans (plants and animals) and other than humans (deities, spirits or subtle beings).

vows made to a Brahmin. Here, then, the burning of the Khāṇḍava Forest assumes a universal value: it is a cosmic sacrifice for the re-birth of the city, but it is also a sort of inevitable event due to a karmic chain of events. Destiny is more than anything else responsible for an act, of which the heroes are only the means.

On a mythical level, the episode in question is inserted onto the wider panorama of the advent of the Aryan populations in northern India. The themes of war, of destruction and finally of the subjugation of the territory are re-proposed and fade more and more in the various episodes of the conflict. And it is interesting that this process goes through a kind of horror and suffering involving every aspect of the territory and what it contains. The next step involves a process of normalisation, a reestablishment of equilibrium that, however, is not free from remorse, as if this were the prerogative of a new ethical and moral value. The state of suffering in Sanskrit terms is defined *śoka*, a word that translates a state of pain understood in its multiple meanings, obviously including physical and mental. It will therefore be clear how the shadow line separating the suffering caused by an act of violence, and the remorse that may ensue from it, in literature can be very subtle.

In Indian doctrines - and here it is correct to take Jainism and Buddhism into consideration - it is *śoka*, understood as a mixture of suffering and remorse, that underlies the concept of non-violence, or *ahiṃsā*. In Indian history the first striking example of this, and probably the most banal, is that of the emperor Aśoka (literally *a-śoka* 'without suffering') who, according to his famous edict on the rock of Dauli, affirmed that, after having massacred the people of the kingdom of Kalinga, he would have been seized with deep remorse and would have therefore embraced *ahiṃsā*, or non-violence, by converting to Buddhism. This is an element returning in a differently complex way in the history of Indian philosophy: there are several thinkers who draw on this theme and rework it as a way of spiritual redemption (Thapar 2009). Another classic example is Mahātmā Gandhi and his followers, as I mentioned above. For the moment, however, it is enough for me to offer the reader a reflection on the theme of *ahiṃsā*, not only as a non-violent attitude, but also as a feeling of compassion (Van Horn 2006, 24).

Going back to the epic, it is possible to give infinite examples of this. In the *incipit* of the *Rāmāyaṇa* (*Bālakāṇḍa*, sarga 2), the Sanskrit epic attributed to the poet Valmīki, there is a key event in which the author witnesses the unnecessary killing, by the hand of a hunter, of the male specimen of a pair of birds intent on mating. The female, it is said, raised a poignant cry of pain at the sight of her companion fallen to the ground and covered in blood. Upon seeing this injustice, the wise Valmīki would have cursed the hunter for eternity for interrupting the poor animal's passion. The two birds, called *krauñcas*, have been identified with the noble Indian Sarus crane (*Antigone*

antigone), a clear metaphor for the protagonists of the epic (Sītā and Rāma) who will be separated because of the events narrated below (Leslie 1998). Erotic passion is a *rasa* (lit. juice, essence), that is, a profound emotion characteristic of the canons of aesthetics in Indian art: here a clear allusion to a spiritual way of salvation. These issues have long been discussed in the literature, but today there seems to be a greater emphasis on the compassion that Valmīki exhibits towards animals (Hammer 2009). A fairly intelligible undercurrent element of this episode clearly indicates that personal empathy with wild animals in general is virtuous. This is the same concept found in the Khāṇḍava forest fire. The numerous references in large part of the Hindu sacred scriptures of man-animal, god-animal metamorphosis or even of sages and seers disguised as animals suggest first of all at least that the non-human animal world shares human emotions. At the same time, the attitude of early Buddhism in the exploration of animal behaviour is equally interesting: in the Pāli Canon it is customary to start such a discussion by emphasising the fundamental importance of friendship (*mettā*) and compassion (*karuṇā*) towards animals (Deleanu 2000, 83). This is extremely interesting because it shows us that the theme of multispecies relations, much discussed today in Environmental Humanities and anthropology, can also be investigated effectively through the lens of ecocriticism in Hindu literature.

4 Is Kali-yuga the Anthropocene?

The concept of time in India is fundamentally based on the concept of *yuga*, which is one of the four eras composing the ages of man. These are inserted in larger units of measurement called *manvantara* and *kalpa*, which constitute the expression of the complete cosmic cycle, of evolution and involution of the universe. This chronological characteristic of Hinduism is however common, perhaps only with some minimal differences, also to other South Asian traditions: the vision of time is therefore not linear, as it is often conceived in the modern West, but curvilinear. In this curve, or rather a spiral section, the four eras of man gradually come together according to a dynamic development. As is well known, these four *yugas*, called Satya, Tretā, Dvāpara and Kali-yuga, very closely recall the four classical Hesiod ages, that is the age of gold, silver, bronze (to which it is associated the heroic age for continuity) and iron. An interesting fact is that, in both Greek and Indian conceptions, humanity seems to face a sort of progressive spiritual decay as well as its own ability to achieve the self-realisation. The idea, therefore, of a descending curvilinear parabola seems to be perhaps the best geometric transposition (*Mānava Dharmasāstra*, I, 80. See Olivelle, 2004).

We will therefore observe that according to the general traditional doctrine, during the Satya-yuga, the men of the golden age were considered the embodiment of perfection, so much so that it is said that they knew neither old age nor death. As angelic beings, they lived according to nature, having direct, equal contacts with the gods.

In the second period, known as Tretā-yuga, the prevailing idea is that this already perfect humanity enters a period of decline. Knowledge and perfection decrease, since what could only apparently be considered the seed of evil enters the costume of men: violence, imbalance, chaos. These elements, marking the beginning of a decline, are still under the full control of superior beings who are able to some extent to alleviate this first imbalance of the cycle and its relative humanity. Incidentally, these beings are the *cakravartins*, universal rulers or emperors of the world - a concept borrowed albeit with some different nuances also in Buddhism and Jainism - who through their knowledge and their ritual abilities are able to defend humanity from this cycle of decadence and equally lead it towards a path of self-realisation.

The Dvāpara-yuga, or the third age, is undoubtedly very interesting for the purpose of our study, since the above-mentioned violence reaches a point of maturity and is unleashed in the world. This change is a sea change: humanity until that moment was represented by beings of great spiritual capacity, of great intellectual talent, with an extremely balanced, long, peaceful life, but this period ends precisely with that terrifying episode narrated in the *Mahābhārata*, in which substantially the caste of the warriors - the 'race' of the heroes, to use a Greek term - enters into conflict with itself and determines its own disappearance, by self-extermination.

But the darkest period in India is considered the fourth and last, the Kali-yuga, or the subsequent age of iron or the current humanity. In fact, our age is described as gloomy: an era in which not only violence is rampant, but in which ignorance, stupidity, the abandonment of all that is sacred would determine a tragic overturning of customs and values. According to Indian thought, the period in which we live is therefore the one in which the history of humanity enters a perverse curve of decay and regression. In other words, since this is the last of the four ages in which humanity has developed its possibilities, the Kali-yuga represents the final segment of this cycle. As in a kind of free fall, time is imagined accelerating, rapidly degenerating; the customs are corrupted with great rapidity, reaching a climax coinciding with the final dissolution (*mahāpralaya*): what in the West would coincide with an *eschaton*, or the End of Times.

In Environmental Humanities there is a certain emphasis in noting that the succession of cosmic eras, the very fact that they are in a certain sense linked (and one the presupposition of the other in the long period of progressive manifestation), is well expressed from the

metaphor of the growing or climbing plant: it develops all its arbo-real possibilities until it reaches its maximum development and then decays. A first phase of growth, from the bud to the stem, requiring an upward movement, towards the sun, can ideally be compared to a golden age: slow, almost eternal in its manifestation. The next phase is similar: the plant or tree continues to widen its fronds even though it no longer develops in height. Finally, when the plant no longer has the strength to remain erect, it decays until it withers. But this is not the last of the phases: a final one follows, in which the leaf, the branch, the plant itself, now withered and dead, detach and collapse to the ground. Attracted by the earth's gravity, the plant falls plummeting to the ground in the blink of an eye; so slow did its development in the golden phase seem, so sudden is its fall into the dark phase.

The animal world also offers a very strong metaphor for this concept through the so-called 'Bull of Dharma'. The standing Bull with its four limbs is considered a symbol of *dharma*, that is, natural law, justice, balance, morality. The four limbs represent the four *yugas*. The Bull standing firmly on all fours is said to transmit the *dharma*, which is followed in its full sense without any absolute violation. The beast however is imagined progressively losing a leg for each era,⁹ emphasising how the *dharma* is bound to falter as the End of Times approaches (*Mānava Dharmasāstra*, I, 81-2).

Indian literature is full of references to the End of Times or to its warning signs that very often coincide with moments of social, political crisis or profound epochal change. To give an example, many myths about the birth of Tantrism, starting from the Indian Middle Ages, support the assumption of a priestly caste that in this dark age is no longer able to convey salvific teachings and therefore the search for other spiritual ways is promoted. These in the history of India bear witness to an attempt at social and religious reform (Padoux 2017, 4 ff.). The advent of Islam in India and the various conflicts caused by the Muslim conquest process were sometimes interpreted from the Hindu perspective as a subversion of order, a fall in values, a sign of the approaching end of the world. War is generally understood as that fire characterising, through chaos and destruction, the temporal gap of change (*pralaya*). More than water, however present in Hindu myth as a germinating principle after the flood, the forest is precisely that element contrasting with that fire. The forest is again a place of tranquility and a hermitage, the place of asceticism where, conversely, one can draw on the principles of knowledge.

It is however interesting to note that in the Indian tradition the end of each time cycle is in any case determined by the magmatic

⁹ Tretā and Dvāpara in fact also etymologically indicate the numbers 3 and 2 referring to the legs of the cosmic Bull.

element: fire, by analogy to the symbols of the forge and the world of blacksmiths, melts and dissolves each element bringing it back to its primordial stage, in order to reach a subsequent rebirth in a new form in the next cycle. This fire, an instrument of dissolution, is sublimated through various symbolisms. The end of the Dvāpara-yuga, that is the era preceding ours, is characterised indeed by the great conflict of the *Mahābhārata*. The end of Kali-yuga, the current epoch, will be marked by the advent of Kalkin, last *avatāra* of the god Viṣṇu, who – leading its ranks in a sort of final Armageddon – will bring the end of the entire cycle (Beggiora 2014). On another level, it is the *tāṇḍava*, or the dance of the god Śiva in a circle of fire, marking the end of an entire cosmic cycle, which however is in turn the prelude to the next.

It will therefore be quite clear how the serious concern for forest fires, which in turn is one of the main causes of climate change, runs in parallel with the symbolism of the end of the time cycle. The analogy between the Indian myth and the climatic conditions of the planet today are for many a prophecy that comes true or a metaphor fading its symbolic analogy into contingent reality. We should therefore ask ourselves: is the Anthropocene the end of the world? Are global warming, the melting of continental ice, the rising tides perhaps the harbingers of that circle of fire, around Śiva Naṭarāja, announcing the end of time? And is this the illusion, which the Indian world calls *māyā*, experienced through the cyclical phenomenon of death and rebirth?

5 Conclusions: A Recursive Fire

The purpose of this essay is to provide an insight into the major topics discussed in India in contemporary times regarding the ecological and ecocritical perspective. Only for reasons of space, I had to exclude some branches that would also be very important. For example, there are many studies on the perception of the environment and the landscapes in Islamic times: how the sacredness of the Indian territory was understood, how the model of the *chārḇāgh* (four gardens) of paradise could be replicated as a model of domestication of the environment according to geometric principles constantly tending to the sublime and perfection. In addition, the whole issue of the indigenous knowledge on the forest of tribal peoples – or the sacredness of the forest that has been handed down orally in the shamanic traditions of often still marginalised populations – is emerging as very topical. However, I have already exhaustively dealt with the latter subject (Beggiora 2020; 2018) and, as regards the Islamic tradition, we refer to another essay in this issue (Zilio-Grandi). At least I hope to have succeeded in rendering the depth of the eco-critical de-

bate in India and in suggesting to the reader a small theoretical map of topics and materials that can be a useful methodological support even in a global ecological debate.

However, there is one last question that I believe it is important to underline. If the forest fire is a metaphor for a sort of ‘ecochoas’ (Sharma 2018) in which our generation is currently struggling dramatically, is it not true that, according to Indian sacred literature, this crisis is recursive? Had not a similar crisis with the fire of the Khāṇḍava forest already occurred in the previous *yuga*? In my opinion, it would therefore seem that the fire was a recursive element in the history of man, which however tends to recur each time in a more serious and worrying form, as a result of the degeneration of time. According to this interpretation, the environmental drama of the Anthropocene is not a novelty in the history of humanity and it is intriguing to note how the sacred tradition can to a certain extent overlap, without too much contrast, with historical studies on the stages of the evolution and cultural development of *Homo sapiens*, from the Paleolithic to the Industrial Revolution and beyond (Agoramoorthy, Hsu 2011). Is man therefore something detached and opposed to nature or is he fatally linked to it? Will we destroy the planet on which we were born and raised, or will we have the ability to lead it towards new and stable balances? In a reinterpretation of the aftermath and the teachings of the Khāṇḍava Forest, passing through remorse, compassion, empathy, non-violence, the spiritual elevation of a humanity that has already been a protagonist of this, it would seem possible. The answer to how to get out of the Anthropocene is (also) written in ancient Indian literature.

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Mining in a Sacred Landscape: Adivasis, Deities and Alliances in a Former Princely State in Odisha/India

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Abstract The papers explores ideas of a sacred landscape inhabited by indigenous people as well as other communities, deities as well as other beings manifested in localities and ‘objects’ forming various relationships, alliances and a thick web of relationality in a former kingdom in central-eastern India. It introduces these historically evolved ties through the foundational narratives as well as contemporary rituals, while the area is undergoing major transformations after Indian independence and even more so in a phase of accelerated industrialisation, especially tied to a mining boom and sponge iron factories. The latter not only threatens to uproot an existing, though changing sacrificial polity around local deities, but it also has massive ecological consequences and leads to partially successful protests.

Keywords Mining. Sacred landscape. Adivasi. Odisha. Goddess.

Summary 1 Introduction. – 2 Mining, the Sponge Iron Industry and Its Darker Sides. – 3 Protests and Resistance. – 4 Bonai, Its Sacred Landscape and Foundational Narratives. – 5 Performing an Alliance. – 6 Old Photograph. – 7 Conclusion: Multiple Sovereignties, Multiple Perspectives.



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1 Introduction

Sundargarh District got its highest flagpole with installation of a 100 ft height flagpole with 30 Ft X 20 Ft tricolour at Biju Park, Bonai. The mammoth flag was unfurled by Sundargarh District Collector [...] in the presence of other government officials, representatives of corporate houses.¹

On February 5, 2018, a new “monumental flag” was hoisted in Bonairgarh, which became literally a towering emblem of the Indian state remaining in the spotlight even at night. Located just outside the king’s fort, the vicinity serves as a visible reminder of the most recent state transformation in this former kingdom, i.e. a neoliberal state promoting a rapid industrialisation with expanded mining as well as new sponge iron factories arriving together with industrialists in the valley from 2003 onwards. A state-corporate sector nexus is clearly exemplified by Naveen Jindal, who is not only the Chairman of Jindal Steel & Power, which has significant economic interests in the region including mining, but is also the founder of the Flag Foundation of India, which donated the flag that increasingly overshadows the royal sovereignty and older state rituals.

Asked what will happen if mining would start in and around his village, the Dehuri or ritual specialist serving their Goddess Kant Debi replied:

The seat (*asana*) of our goddess will be lost, our waterfall will be destroyed, all our gods and goddesses, edible roots, whatever materials we offer to the goddess will be destroyed. Asana means the shelter of the goddess and the loss of water will happen if the mining will be conducted. [...] We the Adivasi Paudi Bhuiyan think that mining should not be done in the place where Goddess Kant is staying or the 16 Pradhani of Paudi Bhuiyan [the Paudi Bhuiyan area]. (Interview 2016)

These two quotes and glimpses above indicate an ongoing transformational process in a former princely state that merged with the Indian Union in 1948, nowadays a sub-district of Sundergarh District, known for its wealth of iron ore deposits that attracts the attention

The article is based on discontinuous fieldwork in the area since 2003 initially funded by the German Research Council (DFG) within the *Orissa Research Project* and later on as part of the Graduate School “Cultural Encounters and Discourses of Scholarship” and Aarhus University. I am also much obliged to Late Raja Sahib K.K.C. Deo, to Raja Sahib Bir Keshari Indra Deo and to my local interview partners, who helped immensely in the course of my work. Diacritics have been omitted throughout the article.

¹ <http://orissadiary.com/100-feet-high-monumental-flagpole-bonai/>.

of the Indian government and business houses alike, but also present dissenting voices of Adivasis or indigenous people resisting being pushed aside by extractive industries in a period of rapid industrialisation – reminiscent of Hylland Eriksen’s (2016) idea of ‘overheating’.

Focusing on Bonai, an area also known for its pristine forests and rich biodiversity – especially in the jungles and sacred groves² –, the chapter looks at the case of the Bhuiyan and especially Paudi Bhuiyan (Hill Bhuiyan) predominantly populating the hills, while being embedded in a historically evolved royal framework that shows a certain tenacity. The Paudi Bhuiyan are a small community of 5,788 people in Odisha, as compared to 306,129 for all Bhuiyans in general – the latter being part of a wider administrative category named ‘Scheduled Tribes’ forming 51% of the population in the district as well as the Bonai Sub-Division.³ Besides, the Government of India classifies Paudi Bhuiyan as “Particularly Vulnerable Tribal Group”, i.e. communities with “declining or stagnant population, low level of literacy, pre-agricultural level of technology and [...] economically backward” to which “priority is accorded for their protection and improvement in terms of the social indicators like livelihood, health, nutrition and education so as to decrease their vulnerability”.⁴

Against this backdrop, the paper briefly looks at the trajectory of mining and the sponge iron industry as well as its environmental impact in an area, before delving into the sacred landscape of Bonai with its tangible manifestations, but also the foundational narratives of the kingdom and current ritual performances in order to unpack, it is argued, an existing, yet threatened “‘world’ of rich relationality and sociality” (Harvey 2006). The Paudi Bhuiyan, and the Bhuiyan broadly, as well as the raja (and other communities) are linked through a foundational alliance, which is mediated through gods, but even more so goddesses. The ‘charter myth’ of Bonai as kingdom includes communities, deities etc. but also non-humans – first and foremost the peacock supporting the conquest of the realm and being later enshrined in the royal crest. The alliance and privileged relationships between humans/communities and non-humans or *ak-*

2 Ecological and Sociocultural Aspects of Biodiversity Conservation in Sacred Groves of Bonai Forest Division, Odisha, India by P. Mohapatra et al. – see https://www.academia.edu/38582810/Ecological_and_Sociocultural_Aspects_of_Biodiversity_Conservation_in_Sacred_Groves_of_Bonai_Forest_Division_Odisha_India.

3 See Census 2011: <https://ruralindiaonline.org/en/library/resource/statistical-profile-of-scheduled-tribes-in-india-2013/>.

4 F. No. 22040/37/2012-NGO, Government of India, Ministry of Tribal Affairs, Scheme of Development of Particularly Vulnerable Tribal Groups (PVTGs), (Effective from 01.04.2015) – see <https://webcache.googleusercontent.com/search?q=cache:2H2mWBS61WAJ:https://tribal.nic.in/downloads/NGO/Latter-Notice/14.pdf+&cd=2&hl=de&ct=clnk&gl=dk&client=firefox-b-d>.

tants, particularly deities, form a thick web of relationships manifested in the landscape, but also a sacrificial polity of the former kingdom as well as royal chronicles and other narratives. All of it hints at alternative ontologies raising questions of time and boundaries (esp. between ‘entities’, persons, things), of visibility and the broad sensorium. While this web and wealth of relations is threatened by a rapid and rampant industrialisation, protests have been partially successful in preventing a new mega-mine. In fact, the established alliances going back to foundational narratives and expressing forms of hierarchical, yet mutual care in contemporary rituals, seem to have been instrumental in the protests, while being reinvigorated in the process.

2 Mining, the Sponge Iron Industry and Its Darker Sides

The global demand for steel – especially in the first decade of the twenty-first century – led to a significant expansion of mining in Bonaï in the post-liberalisation period and even more so in a period of “accelerated change” (Hylland Eriksen 2016) after 2000. While mining was not new to the area and the first iron ore mines were established around the middle of the twentieth century to provide ore to the newly built Rourkela Steel Plant in the 1950s, new mines have come up in the hills. From 2000 till 2014, permission was given to increase production from 41,654 million tons to 118,978 million tons, leases were expanded or in other cases an over-extraction of ore was even legalised in retrospective – all leading to a depletion of ore resources.⁵

As the Justice Shah Committee detailed in its Report 2013, in the first decade after 2000 there was “rampant illegal mining across the state” with reference to the unlawful extraction of iron and manganese ores – all adding to a “mine of scams”.⁶ The report listed almost 150 cases of violations of environmental clearances and mining plans leading to the destruction of pristine forests, pollution of rivers etc. As the Commission stressed in the report, almost 80% of mining took place in forest areas, and almost 100 out of 200 mining leases did not have environmental clearance. It concluded its report with a staggering estimate of an illegal mining scam worth more than Rs 59,000 crore in just two districts – namely Keonjhar and Sundar-

⁵ <https://www.downtoearth.org.in/news/m-b-shah-commission-report-odis-has-mine-of-scams-exposed-43348>.

⁶ <https://www.downtoearth.org.in/news/m-b-shah-commission-report-odis-has-mine-of-scams-exposed-43348>.



Figure 1
River Bonai 2016.
Photo by the Author

garh (including Bonai).⁷ Bonai itself, it was estimated, covered roughly 25% of the sum.

Leaving aside illegal mining activities, the average profit per ton of iron ore rose from ca. Rs 140 per ton in 2001-02 to more than Rs 3,200 per ton in 2010-11 and companies earned “super normal profits”, while at the same time the local population did not benefit from these profits and the average income of Adivasis remained around a meagre Rs 8 per day, while facing the loss of forests and a concurrent impact on its society and culture – even partial displacement among Paudi Bhuiyan.⁸ Even after a rather massive industrialisation in Bonai, unemployment among them remained high.⁹

Moreover, while mining increasingly impacted the hills, a relatively visible transformation occurred in Bonai subdistrict, i.e. the valley was increasingly dotted with sponge iron factories which produce iron pellets (called ‘sponge iron’ due to their porous nature) by reducing the carbon and oxygen content without melting the iron.¹⁰

7 See <https://www.downtoearth.org.in/news/m-b-shah-commission-report-odishas-mine-of-scams-exposed-43348>. However, in 2017, the figure was corrected to almost Rs 18,000 crore following the investigation of central empowered committee appointed by Supreme Court.

<https://www.hindustantimes.com/india-news/decade-after-scam-odisha-imposes-penalty-of-rs-2056-cr-for-illegal-mining-101612209948737.html>.

8 <https://www.downtoearth.org.in/news/m-b-shah-commission-report-odishas-mine-of-scams-exposed-43348>. See also https://silو.tips/queue/national-workshop-on-underlying-causes-of-deforestation-and-forest-degradation-i?&queue_id=-1&v=1633076969&u=MTg1LjQ1LjIyLjEzMQ==, 155. See also Padel 2012.

9 https://silو.tips/queue/national-workshop-on-underlying-causes-of-deforestation-and-forest-degradation-i?&queue_id=-1&v=1633076969&u=MTg1LjQ1LjIyLjEzMQ==, 146. See also *Report On Employment and Unemployment Situation of Odisha Based On Pooled Data of State and Central Samples of NSS 66th Round 2009-10*: <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKewiDwbXryq7zAhXG-yoKHYvsAaEQFnoECACQAQ&url=http%3A%2F%2Fwww.des-orissa.nic.in%2Fpdf%2Fns-68-emp-unemp.pdf&usq=A0vVaw230FDrHGGkz2yJ-4K0kclh>.

10 On sponge iron see: <http://www.businessdictionary.com/definition/direct-reduced-iron-DRI.html#ixzz3eG1bIfRv>.

The period 2003-08 became a boom period for sponge iron due to the demand for steel, along with the high price of metal scrap and its restricted availability, while the factories required a relatively low capital investment, and promised high profits based on subsidies and availability of raw material in the area.¹¹ In fact, it had been estimated that a “0.033 MTPA plant requires a capital investment of about ₹7-12 crores with a recovery period of 12-18 months and can generate profits to the tune of ₹60 lakh per month”,¹² which makes it a highly profitable venture. Subsequently, India became the largest sponge iron producer in the world with the number of units multiplying ten times from 2004 onwards, reaching a capacity of about 37.30 MTPA - with around a third of the production being concentrated in Odisha, out of which 10-13 units based in Bonai itself (2010).¹³ Though the production had its ups and downs, for example, due to deceleration in the steel demand, but increasingly also environmental issues and protests as well as a tighter control on the supply of iron ore, it remained somewhat stagnating on a high level after 2009.

As in case of mining, the unprecedented growth of the sponge iron industry also led to an equally unprecedented environmental impact - especially in case of coal-based factories. However - as the Centre for the Study of Environment found in a 2011 report (*State Pollution Control Boards are Failing Miserably in Controlling Pollution from Sponge Iron Factories Across the Country*) - in many cases they functioned largely without state interference.¹⁴ Given the pollution level, including air pollution of such dirty form of growth and the literally ‘dark clouds’ of the chimneys, the Ministry of Environment and Forests (MoEF) felt compelled to classify the sponge iron industry in the ‘red category’ of industries, i.e. the most polluting ones.¹⁵ As Rifat Mumtaz observed already in 2008 in terms of the environmental consequences:

Thick black smoke, contaminated water, depleting vegetation, falling agricultural yields, premature death of domestic cattle, and poor human health conditions are just some of the impacts. The

11 *Sponge Iron Industry. The Regulatory Challenge*. Report by the Centre for Science and Environment 2011, 7 - see <https://www.cseindia.org/sponge-iron-industry-the-regulatory-challenge-7729>.

12 See <https://www.cseindia.org/sponge-iron-industry-the-regulatory-challenge-7729>, page 7.

13 See footnote 12; “Sponge Iron Industry Needs Quick Actions for Survival”, *Economic Times*, Oct 24 2013: http://articles.economictimes.indiatimes.com/2013-10-24/news/43396343_1_restricted-availability-steel-melting-scrap-iron-ore.

14 <https://www.cseindia.org/cse-releases-the-study-on-sponge-iron-sector-in-odisha-2097>.

15 <https://www.cseindia.org/sponge-irons-dirty-growth-2100>.

plants are located deep inside forested regions that are rich in iron ore and have already been devastated by the mining industry.¹⁶

Thus, hills and valley in Bonai somehow share a similar plight, and the loss of pristine jungles in the process means a loss of biodiversity which has not even been fully understood and studied. The recent discovery of new species such as the Limbless Lizard from the Khadadhar area may serve as a case in point here. Though not much is known about it, “[i]t is presumed that this species is found only in this forest (because it likes to live in cool and dense forest) and considered as a keystone species”.¹⁷

3 Protests and Resistance

Not surprisingly this industrial transformation led to protests. As vividly documented by Biju Toppo and Meghnath in their documentary film *Iron is hot* (2010), common people felt compelled to resist the factories and to fight for their own survival in the midst of such a life-threatening environment – “with few regulations in place to protect those most vulnerable, the people must take it upon themselves to fight to save their land and livelihoods”.¹⁸ And with the number of factories and mines growing, protests grew in Bonai too. For example, in 2008 protests against the high density of factories around a semi-urban settlement – in some estimates even 17 polluting factories in a 5km-radius – began and

500 women members of the Bonai Vana Suraksha Samiti Mandal [Bonai Forest Protection Association], a people’s front in Sundargarh district, marched to the sub-collector’s office in January 2008. They were carrying samples of soil, contaminated water and grains as proof of damage caused by sponge iron factories. These factories have high stack emissions and dump ash and char in open areas. The district administration ordered an inquiry and 12 factories were closed, only to reopen 42 days later.¹⁹

¹⁶ <https://www.business-humanrights.org/en/latest-news/dark-clouds-over-indias-sponge-iron-industry/>.

¹⁷ https://silo.tips/queue/national-workshop-on-underlying-causes-of-deforestation-and-forest-degradation-i?&queue_id=-1&v=1633076969&u=MTg1LjQ1LjIyLjEzMQ==, 152.

¹⁸ For details: Kolkata People’s Film Festival (<https://corkokolkata.wordpress.com/the-cor-stall/2261-2/>). The film received: Best Environmental Film National award, 2010, Best Environment film IDPA, 2009.

¹⁹ Sugandh Juneja 2011 (<http://www.downtoearth.org.in/coverage/sponge-irons-dirty-growth-32920>).

Apart from sporadic protests against sponge iron factories with short-lived success, resistance against mining galvanised from 2006 onwards when the South Korean steelmaker POSCO proposed and received a prospective mining license to open a mega-mine in Bonai for an area of more than 6200 ha (in comparison, the older mine of the Orissa Mining Corporation covered Orissa Mining Corporation covered an area of 'only' 160 ha).²⁰ Though finally shelved in 2012, this project was initially supported by the State Government and envisioned as largest Foreign Direct Investment (FDI) in the state entailing a total investment of Rs 51,000 crore for a mine located on top of the iconic Kandadhar waterfall and at the heart of Adivasi settlements, a steel plant at Jagatsinghpur, and a captive port at Paradeep.

The promise of a brighter future projected by POSCO's own slogan "Steel makes our world a better place"²¹ rather met with skepticism based on experiences with mining elsewhere in Odisha. Fearing a displacement of up to 30,000 people, the project met with massive resistance. For example, a local nongovernmental organisation known as Khandadhara Suraksh Samiti (KSS) [Khandadhar Protection Association] brought together

one massive rally at Bonaigarh region followed by a thousand of tribal peoples who had promised by taking water in their hands not to allow POSCO to lift the iron ore from the Bonaigarh region where in, it is, understood [sic] to have a deposit of 600 million metric ton of iron ore spread over a land of about 62 square Km. Fifteen days thereafter the tribal people gheraoed/cordoned one of the officers of POSCO at Bonai Sub Collector office who had came [sic] to the area for their survey and other government sanctions. The tribal people literally take that official's consent who had promised not to come to the area for their project work.²²

During the rally, the Subcollector of Bonaigarh was asked to submit a memorandum to the governor of Odisha. The petition handed over to him detailed the demonstrators' fears and frustrations. Extensive mining and the resulting pollution were projected to severely harm - if not completely displace or even eliminate - the Paudi Bhu-iyani communities in the area. Furthermore, the danger of an iconic waterfall totally drying up and creating ecological devastation was

²⁰ https://silo.tips/queue/national-workshop-on-underlying-causes-of-deforestation-and-forest-degradation-i?&queue_id=-1&v=1633078606&u=MTg1LjQ1LjIyLjEzMQ==, 151-2.

²¹ <http://www.posco.com/homepage/docs/eng3/jsp/s91a0010001i.jsp>.

²² "Odisha's Tribals", 16 August 2007: see <http://archive.indianexpress.com/news/orissas-tribals/210689/>.

clearly stressed. But it was also emphasised the religious significance of the area by mentioning Sita as a pan-Indian deity who is believed to have passed through the Bonai when she was kidnapped by Ravana, and by referring to “Mata Kanteswari Devi” (i.e. Kant Debi in her Sanskritized name), whose divine abode is near the waterfall. Indeed, as the Kant Dehuri as religious specialist of the goddess pointed out in the abovementioned interview in 2016, everything will be lost – the seat of the goddess, all water and the waterfall, all edible plants. This same point was poignantly summarised in an NGO report based on discussions with villagers in the surrounding area:

The forest and stream of Khandadhar [waterfall] has an immense religious and cultural significance for people of Bonai and adjoining area. The Khandadhar Hills are the abode of “Maa Kanteswari Devi”, the chariest goddess of local people and deity of Paudi Bhuyans. There is one temple of “Maa Kanteswari Devi” in the form of a cave near Bahapura stream [...]. There is a belief that she comes out from this cave on invitation of Bonaigarh’s King in the month of Dushera [i.e. dasara] to give blessing to its worshipers and fulfils the cherished desire of the people. There is a strong feeling among the local people that any destruction to her temple or the habitat of wild animals and home land of Paudi Bhuyans would create catastrophe in the region.²³

Despite the fact that the POSCO plan appears to have been abandoned – a success for the protesters – work in the existing mines continues and an auction of additional mining deposits is still being considered. Thus, the struggle may continue and the long-term outcome of the resistance movement against the takeover of the land, against the expected environmental impact, but also in defence of the goddess remains to be seen (see e.g. Odishatv website).²⁴

4 Bonai, Its Sacred Landscape and Foundational Narratives

The frequent references to Kant Debi, but also to gods and goddesses more generally and to animals and plants very broadly make it worthwhile to look more closely at the sacred geography and at the foundational narratives of the former kingdom in order to understand what is at stake here. Entering Bonai, it is argued, does not mean to simply

²³ https://silo.tips/queue/national-workshop-on-underlying-causes-of-deforestation-and-forest-degradation-i?&queue_id=-1&v=1633076969&u=MTg1LjQ1LjIyLjEzMQ==.

²⁴ <https://www.downtoearth.org.in/news/mining/fight-for-khandadhar-53257>.

arrive in a valley surrounded by hills, but one enters “a living, storied and intricately connected landscape” (Eck 2012, 2). This sacred geography may be best understood as a symbolic web dotted with material manifestations of the divine including temples, such as the one of the tutelary goddess; small and at times non-descript shrines commemorating mythical figures; caves as abodes of deities; crossings (*tirtha*) considered as connections between worlds; but also swords as divine yet mobile manifestations and so forth. These sites, beings and objects represent an eclectic combination of different, yet entangled traditions that left an imprint on Bonai, for example Shaiva, Shakta and Vaishnava traditions within Hinduism linked to the royal family and others having intimate relations as heir, legal owner, guardians, servitors, priests etc.²⁵ These localities and tangible manifestations are inhabited by humans and non-humans, animals associated with deities, spirits etc., and intersect with texts and ritual performances outlined later, but let me start with a few concrete examples.

The abode of Lord Baneshwar as manifestation of Lord Shiva, playing a significant part in the formation of the kingdom and as Lord of the place (*sthanpati*), is the largest, wealthiest, and definitely one of the most important temples within the royal framework. His shrine and the royal fort lie on opposing sides of a bend in the river Brahmani. Though increasingly engulfed by an expanding town, Lord Baneshwar’s temple was once thought to be located in the wilderness, to which the raja paid periodic visits (e.g. during the investiture), which could be interpreted as symbolic repetitions of the first raja’s foundational migration into the ‘wilderness’. And, unlike other temples, the Lord is served by Bhuiyan priests (*pujari*), indicating a higher status and special access to the *sthanpati* for the community.

The relation between Lord Baneshwar, the Bhuiyans and the royal family is elaborated on in the royal chronicles (*rajbonsaboli*) or foundational narratives of the kingdom. Though some may consider the narratives simply as myths in the sense of something being untrue, I agree with Harvey pointing out that “one function of such narratives is to put the hearer into the scene and induce ‘an awareness of being in the world’ of rich relationality and sociality” (Harvey 2006, 101). Leaving aside debates around the contested concept of myth, in case of Bonai the foundational narratives point at a “transformational world” (Castro 1998, 471) in which gods and ancestors are also related to animals and plants and here especially to the peacock and Kadamba tree with a “key symbolic and practical role” (Castro 1998, 471) by performing protective acts for humans who in turn are in a

25 For the sake of brevity, the article largely leaves out the Vaishnava tradition, though it e.g. Lord Rangunath as tutelary god present in the form of the *salegram* stones is certainly equally relevant.

transitional phase. Thus, the charter narrative hints at alternative ontological dimensions, but let us turn to the concrete narrative presenting Lord Baneshwar, the peacock and Kadamba tree intertwined with the fate of the raja-to-be Pratap Deo arriving in the wilderness:

At that time Bonai was full of forest. First Pratap Deo came to Singhjoda and stayed there changing its name to Kadambadiha. At that time Kolha, Bhuiyan, Keuta and other Adibasi people were staying at Bonai. Among them Bhuiyans were the supreme (*srestha*) group and enjoying the landlordship (*Jamindar*). (Adapted from Pramanik, Skoda 2013, 49)

Pratap came to know about Lord Baneshwar as manifestation of Shiva and began worshipping him. The local chiefs came to know about it and conspired to kill the stranger. Returning from the Baneshwar temple Pratap noticed them, was worried about their intentions and took refuge in the jungle. However, the chiefs followed him.

Knowing this Pratap Deo looked around to save his life. Then he saw a hollow tree (*gacha khola*). He prayed to Baneswara and entered into the hollow tree. A peacock was sitting on the tree. With its tail it wiped out the footprints of Pratap Deo and again sat on the tree. All Jamindars reached there and couldn't find anybody. [...] Pratap Deo saw everything through the bark of the tree and on that day out of fear he didn't come out from there. That night Baneswara appeared in his dream and gave him the order "Pratap Deo, I make you the King of Shronita Nagar. You will enjoy the kingship without any obstruction". The Raja asked: "How can I be the King?" Banasura told: "Tomorrow morning whoever you meet in the temple, keep them with you and kill those people. Being the king of this place, you have to worship the tutelary deity (*ishta debi*). Debi will order you, in your dream". Raja [...] came out from the hollow tree. He spent the whole night beneath the tree. (Adapted from Pramanik, Skoda 2013, 50)

The next day he meets the Bhuiyan chief and as ordered in the dream forms an alliance with him, which lasts until today as it will be shown later. Blessed by Lord Baneshwar and together with his new ally, the first raja kills the other chiefs and according to the narrative, the chiefs revealed the presence of the tutelary goddess Kuari [Ma Kumari]. Besides, some chiefs like Mahabira [great hero] stated conditions at the time of their death e.g. a requirement to be worshipped by the new raja.

Mahabira [...] came out from his home. Immediately Pratap Deo shot an arrow at him. When he was wounded by the arrow he said, whoever will kill me, he will be the King here. He will worship me,

otherwise his clan will vanish. Pratap Deo said “I will worship you here”. Mahabira’s dead body was burnt towards the eastern side of his home and there, he was worshiped. (Adapted from Pramanik, Skoda 2013, 51)

A place of worship for Mahabira is identified as such outside of the palace and thereby, as in case of the Lord Baneshwar, ties the narrative to the sacred landscape of the valley. In the end, Pratap is anointed as raja and makes the Bhuiyan chief his *samanta* [“general of the forces”], which additionally is also reflected in the ritual performances.

However, in a different version of this narrative Cobden-Ramsay, as Political Agent familiar with the region, argues that the royal family came from Ceylon (Sri Lanka), and claims a “mysterious and foreign origin”. The dynasty’s founder

was abandoned by his mother under a kadamba [Nauclea cadamba] tree. Being thus on the point of falling into the hands of the enemy, the infant was rescued by a peacock, which swallowed him, and kept him in his craw until the danger was past. (Cobden-Ramsay [1910] 1982: 143 ff)

The seemingly helpless infant absent in other Bonai narratives survived through the peacock’s intervention.

The theme presented with reference to the peacock who offers support to Pratap Deo, when his life is in danger, is in line with a broader understanding of his role as “the friend of those who are in need” in India (Nair 1974, 135). In remembrance of the service the peacock together with the Kadamba tree became the key symbol of the Bonai crest adding to the “unrivalled position [of peacocks] in Indian iconography, epigraphy and numismatics” (127). Moreover, the appearance of the peacock in the narrative may not be entirely surprising given, as Nair (1974, 100 ff.) shows, his long association with royalty. On the highest level the famous peacock throne of the Moghuls bears testimony of this intimate tie, while in Odisha the dynasty of Mayurbhanj carries the name and there are also hints at a Mayura dynasty in Bonai before Kadambas (Dash 1997, 169-70). Even today the peacock still enjoys a significant presence in the palace of Bonai in the form of furniture or doors alluding to his role as “guardian of palaces” (Nair 1974), while both, peacock and peafowl are being considered rather common birds around the Khandadhar waterfall and in the district generally.²⁶

26 For example, the District Irrigation Plan of Sundargarh District, (Odisha State), March 2016 states that “common birds are pea fowl, peacock, parrots and myna in

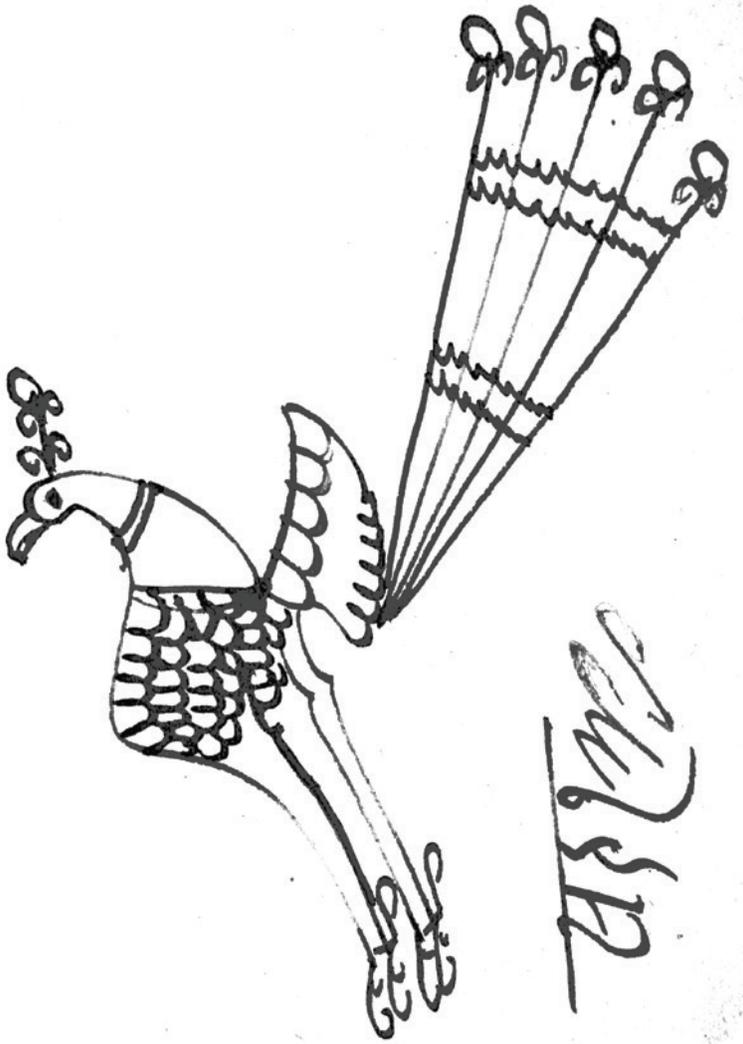


Figure 2 Peacock in a seal with a hand-written peacock as royal symbol of Bonai – file dated 1899.
Photo by the Author



Figure 3 Peacock in a door at the palace. Photo by the Author

The peacock, however, is not only linked to royalty, but according to Bhuiyan myths, the community was born out of a peacock's egg "which took that shape when a drop of semen [sic] of the Creator flowed into the earth" (Dash 1997, 172). Similar ideas are expressed in case of the Mayurbhanj dynasty, whose ancestor is believed to have emerged from the egg of a pea-fowl (Nair 1974).²⁷ The Bhuiyan narrative not only points at pavlatry or the worship of peacocks common in India, considered as original habitat of the bird, generally, but at strong peacock cults in part of Middle India, where – together with south India – , according to Nair (1974, 168) one finds the "staunchest votaries of pavlatry". As Nair (1974, 93 ff.) elaborates, the peacock has been venerated as Mother Earth and associated with a range of deities across the subcontinent, but among indigenous people in Odisha and the Northeast, the peacock with its rich lore has, for example, been linked to ploughing, while at times boys have even been turned into peacocks.²⁸

As Douglas (1967, 65) argued, the power of myths lies in their polyvalence and "every listener can find in it references to his own experience". Such a "range of reference for its native hearers" (65) may not only refer to the origin of communities such as the Bhuiyan, but may also relate to the emergence of the peacock feathers, which in turn are considered auspicious and metonymic for the worship of Krishna in Hindu traditions (Nair 1974, 107 ff.). In versions of the *Ramayana* epic, as Nair (1974, 136) shows, one also finds a striking parallel to the Bonai narrative in coupling the bird with the Kadamba tree. For example, in the *Uttarakanda Ramayana*, "Rama beholds the peacock in company with his mate singing after a dance with the fan-tail outspread, perched on the Kadamba tree, with the pang of separation from Sita greatly enhanced at the sight". The dance, often consid-

the district". https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cad=rja&uact=8&ved=2ahUKewjomZmRy67zAhW0y4sKHQLLBvcQFnoECA4QAQ&url=http%3A%2F%2Fparksy.gov.in%2Fmis%2FUploads%2F2016%2F20160617011210512-1.pdf&usq=A0vVaw1KkMKrtZ_NWupxbi8i9cuH. And an Eco-Lodge next to the Khandadhar waterfalls claims that "in the evening Birds, Peacocks and barking deer call out loud to temper the excitement of the tourist" <https://jmsrkl.blogspot.com/2019/03/khandadhar-nature-camp-eco-tourism.html>.

27 See also Roy 1935. The Hill Bhuiyas of Orissa, Ranchi. Roy argues that the Hinduised Puran in Mayurbhanj stated that "the semen of Bhagwan (God) fell on the earth and produced an egg resembling a pea-hen's egg. From the white of this egg sprang the first ancestor of the Purans, from its membranous coating the progenitor of the Sarasvas, from its shell the first ancestor of the Kharias, and from the yolk the ancestor of the Bhanja Rajas of Mayurbhanj". (Roy 1935, 25). He also referred to Risley who identified Purans with Bhuiyas.

28 Nair (1974, 96 ff.) refers to stories about the origin of peacock in Chhattisgarh, Odisha etc, for example among the Kuttia Kondh, Soara, Gadaba, Baiga but also Khasi – frequently collected by Elwin. For example, the peacock is worshipped as Thadha Penno among Maliah Kondh.

ered with awe, itself is richly connotated and seen as “harbinger of clouds” and broadly as heralding rain (Nair 1974, 151).

The narratives refer not only to peacocks deeply embedded in royal ‘mythology’ as well as indigenous culture, but also to Ma Kumari as tutelary goddess whose presence has been revealed by the autochthonous chiefs before being killed by the first ruler. Her temple is situated north of the palace marking the boundary of the fort and is arguably the most important goddesses in the Shakta tradition located in Bonaigarh. Not unlike other goddesses, she combines a role as “protectress of a site” by being placed right on the boundary with a role as the “protectress of a family” whose tutelary goddess she has become (Biardieu [1981] 1989, 132). Ma Kumari is a goddess who is often linked to Durga and vice versa. This connection is emphasised in a prayer (*janan*) dedicated to her in the royal chronicles (Pramanik, Skoda 2013, 38), in which she is addressed as ‘mother’, ‘demon-slaying goddess’ (*Mahisamardini*), ‘caretaker of the whole world’ and ‘caretaker of the fort’ (a universal as well as very specific context of protection), or as ‘tutelary deity of Bonai’ and ‘Durga of the forest’ (*Bana Durga*), implicitly also linking the royal family to wilderness. Together with Durga present in the palace e.g. as Naba Durga in the form of bracelet(s) known as *nabadurga kankana*, but also together with other goddesses surrounding the fort in all directions, Ma Kumari is classified as goddess of the *chandi* form, meaning she is generally fierce, possibly destructive, capricious, but also benevolent as well as motherly, yet does not represent a *shanti* form (e.g. like Lakshmi) – a local distinction correlating to widespread goddess classifications (Biardieu [1981] 1989, 140; Michaels 1998, 247).²⁹

Ma Kumari is feared by many because of her *chandi*-like appearance, and several people claim to have witnessed her terrible manifestation at night. Though she is portrayed as a caring mother (*ma*) during droughts and outbreaks of contagious diseases such as smallpox, her ‘terrible’ side is highlighted in stories about her unusual idol (*murti*) being disfigured after devouring a young boy – an act commonly associated with the goddess’ ambivalent role as ‘childless mother’ yearning for children. In the royal chronicles it is stated that Ma Kumari as goddess of the fort (*gada debi*):

takes care of the state’s well-being. Once one sage [*bramhachari*] came here. At that time Bonai was full of dense forest and he stayed at Kumari Debi’s place to worship her. He had a student

²⁹ One often encounters an opposition expressed as Sri / Lakshmi > wife > prosperity > pure > pacified > passive > mild > vegetarian versus Durga > virgin / unmarried / childless > warrior > impure > violent > active > wild > non-vegetarian / blood sacrifices.

[*shishya*] with him. He sent the student to fetch water from the river and he went to the village to beg for alms. After returning he saw that water was there but the student was not. The Bramhachari searched everywhere, but did not find the student. Then he saw a pair of footprints in front of the Goddess. He thought that the Goddess had eaten his student. Then he angrily threw the full plate with food offerings [*jou*] on the face of Kumari Debi and her face has been hidden ever since. (Adapted from Pramanik, Skoda 2013, 37)

Ma Kumari is not only present at her temple, but she also has a particular relationship with the raja, who received Ma Kumari's blessings (*prasad*) in the shape of the sword known as *kumari prasad*, according to the royal family. It is one of a collection of divine swords that also includes:

one big sword named 'patkhanda' [*pat* = main, *khanda* = sword]. [...] worshipped at the time of Dasahara or at the time of the coronation ceremony of a new king. In the olden days many, many animal sacrifices and human sacrifices [*nara bali*] were given. The said sword is worshipped with the mantras of 'Bana Durga'. He [the first raja] also received mohana khanda by killing [the chief] Mohana Kondh, [...] and the Kumari prasad tarabari [*tarabati* = sword, scimitar] which are also worshipped. (Adapted from Pramanik, Skoda 2013, 37)

Ma Kumari as well as Durga and other goddesses in the *chandi* form are worshipped by the raja and Paudi Bhuiyan especially during the Dasara festival - also in their multitude of swords which, as elsewhere in Odisha (Schnepel 2002; Mallebrein 2004), are considered as manifestations of divine power. In fact, referring to the swords, the royal priest (*rajpurohit*) argues that Goddess Durga has a *pitha* or permanent seat or presence inside the fort, i.e. being intimately tied to the territory (see also Galey 1989), while also related Bonai to the mythical account of Sati (e.g. Kinsley 1987, 186). During Dasara, the swords' public display can be interpreted as a re-enactment of a raja's first empowerment, symbolically re-conquering his kingdom, while also alluding to Durga's victory over the demon. However, the chronicles hint at deeper connections. There are ties to the Bhuiyan community, as there are with Lord Baneshwar, and Surendranath Mishra, a former Rajpurohit (royal priest), wrote in his version of the chronicles:

Kumari is the goddess of Bhuyan pitha. She was the tutelary goddess of Samanta [Bhuiyan chief]. The Kadamba [royal] clan established Kumari as the 'Goda Chandi' (Chandi of the fort). (Adapted from Pramanik, Skoda 2013, 260)

The quote hints as much at a link to the Bhuiyan as at an attempt to appropriate a goddess from the Bhuiyan into the royal tradition (though contested by the current Samanto). However, another attempt to appropriate a goddess from the autochthonous population might be found in the relationship between Ma Kumari and Goddess Kant Debi – also referred to as Kant Kumari or Kant Mahapru – who stands out among the goddesses present beyond the fort and capital. She resides in the hills with its rich deposits of iron and other ores, at a periphery in the raja's perspective, close to the Khandhar waterfall, which is also perceived as nurturing mother.³⁰ However, it is concretely Kant Debi who is considered the sister of Ma Kumari.

Unlike other Odishan tutelary deities (Kulke [1984] 2001), she has not gone from the hills to the palace, but rather has a sister there. This sisterhood may hint at a probable, though partial appropriation of the goddess. The late Rajasahib K.K.C. Deo referred to Kant Debi as his 'personal deity' in contrast to Ma Kumari as his 'chief goddess' or tutelary goddess. Also considered to be a *chandi* form of the goddess and a manifestation of Durga she is carried once a year during Dasara from her secret cave to the fort Bonaigarh to visit her sister.

The special tie linking raja, Bhuiyans and Goddess Kant Debi is explained in the royal chronicles (Pramanik, Skoda 2013, 39 ff.). In this narrative she is believed to have come from outside (the neighbouring kingdom of Keonjhar) just like the raja came as outsider. She is directly linked to hills where she and the Paudi Bhuiyan reside, but also to the Pano community, which plays a marginal role in her rituals; to the tutelary *devta* of the raja in the form of *salegram* stones representing Vishnu; and to Durga in the form of a bracelet. These potent ritual objects the raja acquired by killing a visiting Babaji who refused to pass them on to the raja voluntarily. The narrative goes on:

After a few years the place where the Babaji was killed was turned into agricultural land and belonged to a person of Pana caste. One day when that Pana was ploughing the land, he could feel that an iron thing struck against his plough. He put it aside and continued ploughing. [...] Finally he could see that it was something like the iron part [*sama*] of a husking pedal [*dhinki*]. He thought of taking it home to use it in his husking pedal. (Adapted from Pramanik, Skoda 2013, 40)

30 As the report of National Workshop on Underlying Causes of Deforestation and Forest Degradation in India, 2008, 151 states: "For generations, villagers of Bonai looked upon the glittering Khandadhar fall as their mother who cared and nurtured them for centuries" https://silo.tips/queue/national-workshop-on-underlying-causes-of-deforestation-and-forest-degradation-i?&queue_id=-1&v=1633076969&u=MTg1LjQ1LjIyLjEzMQ==.

The narrative goes on to describe the appearance of the Kant Debi, which resembles a small metallic snake with a cobra-like hood and has a peculiar “quaint shape” (Roy 1935, 105), essentially “a roundish fragment of some old metal object”, which, from today’s perspective, appears to hint at the rich ore deposits. According to the story, it is a visiting money lender (*Mahajan*) who recognises the piece’s value and tries to own it, but in the end,

The Pana [...] dreamed that he should give the sama to the King, otherwise his clan will be wiped out. That night the King also dreamed that whatever he sees in the morning, he should worship it. That night a Bhuiyan of Jala also dreamed that he should go to the King early in the morning and bring the sama from the Rajbati. [...] The Bhuiyan kept it in Jala. After some days again the King dreamed that it [the sama] will be worshipped as Kanta Debi. From that day onwards Kanta Debi is visible on the day of pratipada [the beginning of the Dasara festival]. (Adapted from Pramanik, Skoda 2013, 40)

The goddess emerges from the earth in the act of cultivation, with obvious allusions to fertility (ploughing as well as the *dhenki* or grinder indicating sexual intercourse) and prosperity (harvesting as well as the moneylender as an expert). Besides, divine intervention through dreams avoids potential conflict (moneylender, Pano, Bhuiyan and raja) and explains the goddess’ presence in the hills as her preferred locality.

5 Performing an Alliance

The narratives in the chronicles and divine manifestations as idols or temples complement and strengthen one other, i.e., the narratives explain the sacred geography, while the presence of deities gives the chronicles tangibility and a sense of facticity. Both contribute to the tenacity of kingship and the central alliance with the Bhuiyans, which is ritually enacted and renewed in a variety of ways. For example, during the investiture of a new raja, last performed in 2011, the *samanto* as highest Bhuiyan chief puts a *tika* or mark on the raja’s forehead, while he should sit on the *samanto*’s lap. For the *tika* soil from the shrine of the *samanto*’s own tutelary goddess is used. Thus, the *samanto* referred to as *matishwar* or ‘Lord of the Soil’ in the chronicles literally hands over the soil, which stands for the *samanto*’s ‘authority of the soil’ (Skoda 2012) but also serves as a symbol for the kingdom, to the new king, who subsequently reaffirms the exalted role of the Bhuiyans in Bonai. In 2011, the ritual was performed at the temple of Lord Baneshwar, where the Bhuiyan occupy a prominent position

as *pujari* (servitor of the Lord), while the setting closely corresponds to the foundational narrative in the chronicles. And, adding a longer historical horizon here, the scene seems to have been very similar in the early twentieth century described by S.C. Roy in his seminal ethnography of the Paudi Bhuiyans in 1935. He wrote on the investiture:

[o]n his return to his palace, he sits in Darbar where a Bhuiya landholder who is known by the title of Samanta makes a mark of sovereignty on the Raja's forehead with earth and then addresses him as "Raja" and says - "I grant thee such and such (names) a village". The Raja in return says "I grant such-and-such (names) a village to you, and make you my Samanta". (Roy 1935, 130)

A close link between raja and Bhuiyan chief is also visible during Cheitra Parba when the raja sits publicly, though temporarily on his throne and the Bhuiyan chief stands behind him - literally backing him up. Yet, the most important ritual to express the close nexus between Bhuiyan and raja is the annual *dasara* celebrations - *dasara* being arguably the most important ritual of kingship in India (Fuller 1992). However, in Bonai *dasara* is a central performance of a wider, yet partially disintegrating 'sacrificial polity' (Nicholas 2013) which revolves around the goddess(es) and connects the raja with his *praja* (subjects), who offer or used to offer services which were often tied to land grants given to them before independence. A case in point is a role known as Kathi, belonging to the Maharona community, and being in charge of the washing and sharpening of the royal swords. The rituals, thus provided "a role for dependents and graded responsibilities for various castes [or *Adivasis*], [and] physically assembles the *prajas* in ranked roles" (Nicholas 2013, 176-7). Since the "sacrificial polity" has been described in detail elsewhere (Skoda 2020), the focus in the following will be primarily on the Paudi Bhuiyan.

Dasara as a ritual cycle of its own is performed during the bright fortnight of the month of *asvina* (September-October) culminating between the sixth day, *sasthi*, and the tenth day, *vijaydasami*, in the royal capital of Bonaigarh, before ending on the following full moon, *kumarpurnima*. The manifold individual ritual steps include e.g. the so-called *Bel barni* on *sasthi*, when the goddess is first welcomed and kept in form of a branch of the bel-tree, or *Khanda basaa* when a ritual seat is established for the two main swords - namely *patkhanda* and *kumari prasad*, which are subsequently worshipped.

From the Paudi Bhuiyan perspective, the central element of *dasara* relates to Kant Debi. On the second day of the fortnightly cycle the goddess leaves her cave and a group of Paudi Bhuiyan carries her in a procession clockwise to the plains and the fort, and back again. This procession connects not only periphery and centre, but through night halts in various villages it also involves headmen (*naik*) and *ja-*

girdar of the Gond community as essential elements of the political structure of the former princely state, but also commoners, Adivasi and others. In fact, due to the growing popularity of the goddess procession with many people being keen to bring her into their house, there are also increasingly delays in the ritual schedule. The route though is outlined beforehand by the raja in an order including the royal crest with peacock and Kadamba tree and is carried by the Paudi Bhuiyan who had come to the palace already earlier.

On the evening of *astami*, the eighth day, a first climax is reached, when the Paudi Bhuiyan arrive at the outskirts of the fort and meet the raja (or his representative) in order to hand over Kant Debi to him - a ritual known as *kant beth* (meeting the goddess Kant). The handing over of the goddess from Paudi Bhuiyan to raja takes the form of a ritualised dialogue that expresses a form of hierarchical, yet mutual care and has apparently not changed much since the time when Roy (1935, 109-10) documented it:

The Dihuri [...] comes up to the Raja with the image, salutes him, and enquires of him about the health and welfare, first of himself, then of his Rani, then of his children, then of his servants, then of his elephants, then of his horses, and last of all about the welfare of the land (Prithvi or Earth). The Raja answers "yes" to every question; and then in his turn, the Raja asks the Dihuri about the welfare of himself and his children and then of the Pauris generally; and to every question the Dihuri replies in the affirmative.

While not all the items such as elephants and horses are mentioned any longer, the *dehuri's* holding of the goddess in his hands together with the raja remains a symbol of a relationship and both sides inquire till date about the well-being of the raja, *rani* and his kingdom. The raja answered affirmatively and after receiving the goddess, traditionally presented the goddess with a new silver umbrella. Subsequently, the raja passes the goddess on to another ritual specialist known as *amat*, who takes care of her during her stay in the fort until the goddess is returned to the Paudi Bhuiyan a day later. However, as another important step Kant Debi, as the chronicles state, "meets Kumari Debi and stays with her as her sister in the armory (*khanda ghar*) in a cooking vessel filled with blood (*rakta handi*)". (Adapted from Pramanik, Skoda 2013, 41) Slightly deviating from the chronicles, the *amat* actually carries the goddess to her sister's temple where both are left alone, i.e. the temple is closed for the public, and the sisters do their 'talking', as he put it, without any disturbance.

The investiture rituals and even more so the annual *dasara* celebrations connect (Paudi) Bhuiyan and raja in multiple ways, while the goddesses staying in the periphery and at the centre are imagined as siblings. Given the existence of such an alliance, perceived as foun-

dational for the kingdom, it may not surprise that the Adivasis seeing their existence and Kant Debi's abode threatened also turned to the raja for support. The fact that both sides participated in protests around 2007-08 appears to be related to the close relationship and seems to have strengthened the ties. Interestingly, taking part in the protest rallies, the late raja emphasised how his father had stopped the Birla company from opening a mine in 1947, even if he could not prevent it after independence - thus blaming the modern state. Indeed, as reports on mining in Bonai state,

no large-scale felling and commercial exploitation of this forest was allowed during Bonaigarh rule. Even the Britishers did not enter here in keeping with the cultural and spiritual significance for local people. Britishers feared that if they did indiscriminate felling in the forest, it was bound to ruffle the emotion of the local people which might turn into large scale violence, difficult to contain. That is why this forest was kept out of all business and commercial activities till the Government of India gave lease to OMC [Orissa Mining Corporation] for iron ore mining at Kankaragarh under this forest in 1966. This was the first large scale economic activity inside Khandadhar forest which started denudation of forest and created threat over survival of Khandadhar fall which is now aggravated by the arrival of the POSCO mining (company).³¹

The raja was clearly not the only sought-after ally of the Paudi Bhu-nyan in their struggle - in fact, several parties across the political spectrum jumped onto the issue - , but the raja's esteemed position was reflected in the list of signatories to a petition passed during the rally, where he appears first, before the Member of Parliament, demonstrating the growing role of elected officials, followed by his son and other dignitaries such as lawyers and representatives of the Bar Association, ex-MLAs, and others (see Hindtoday website). While newspapers highlighted the involvement of the local Member of Parliament, an Adivasi from Bonai, as an important voice in the anti-mining protest, there was also an undercurrent of mistrust vis-à-vis politicians broadly, who were blamed for the rise of mining and its negative impact. As the Dehuri stated later: "Our leaders are doing those things. In order to take money, they are doing it by force".³²

This multitude of players, barely indicated here, hints at the multilayered character of protests with many stakeholders and agen-

³¹ https://silo.tips/queue/national-workshop-on-underlying-causes-of-deforestation-and-forest-degradation-i?&queue_id=-1&v=1633076969&u=MTg1LjQ1LjIyLjEzMQ==.

³² Interview 2016.

das, which however, does not foreclose that otherwise seemingly contradictory categories such as kingship and elective politics may be bridged.³³ Yet, by stressing the threat to Kant Debi, the protests also referred back to the raja, who – apart from genuine mutual concerns and sympathies for Paudi Bhuiyan – could conceive mining also as potential threat to his own, already somewhat reduced ritual centrality, which would be further reduced if the Paudi Bhuiyans and Kant Debi were dissociated from the palace.

6 Conclusion: Multiple Sovereignties, Multiple Perspectives

The current sub-district and former kingdom of Bonai has undergone substantial transformations and a period of accelerated change since the early 2000s – driven primarily by expanded mining and an industrialisation in the form of sponge iron factories. As detailed above, these extractive industries promoted by governments on various levels and fuelled by global demands have a severe environmental impact, causing multiple forms of pollution (air, water) and threatening the rich biodiversity of the area. Moreover, new mega-projects would further endanger and possibly displace the local communities – first and foremost the Paudi Bhuiyan settling in the hills prized by mining companies for their rich deposits of various ores.

Protests against mining have not only highlighted the environmental dimension, indeed a question of life and livelihood for the local community, but have also foregrounded a cultural dimension – namely the threat to the local goddess, the mother, residing in the hills. Indeed, existing and even more so new projects pose a threat to the divine cosmology as much as to the water, animals and plants as the ritual specialist of the Paudi Bhuiyan stressed in the introductory quote – apparently pursuing a more holistic approach.

Looking at the sacred geography, the various narratives around it, especially those foundational for the kingdom of Bonai, but also the ritual performances of the Paudi Bhuiyan, raja and others one encounters vibrant manifestations tied to localities and ‘myths’ – mutually reinforcing each other. This focus leads into webs of rich relationality and sociality including alliances and relationships of care, which is partially reminiscent of lifeworlds described by Descola (2011, 14 ff.) where humans and non-humans are seen as “separated by mere differences of degree, not of kind” and where an “objectification of nature” is increasingly brought in the form of resource extraction by outsiders rather than being pursued by autochthonous communities.

33 On this point see also Tripathy 2014.

What some consider as “resources” in this logic, are actually “sources of life” for Adivasis (Padel 2012, 50) and a potential loss of the land and displacement of an already vulnerable community, acknowledged as such by the state, may even lead to a “cultural genocide in the sense of a dislocation of the community and total disruption of internal and external community-structures (51).

Yet, protests have been partially successful and prevented a new mega-mine – also by mobilizing alliances (apart from forging new ones), which are rooted in foundational narratives. Ironically, the narratives around the Goddess Kant Debi residing in the hills and revealed to be present in the form of a metallic object, seems to anticipate a certain greed to possess her – which may well be understood as alluding to the resource extraction. This comes to the fore in the story in the role of a moneylender or Mahajan, often stereotypically seen as embodiment of manipulative money-mindedness. Though nobody interpreted the story to me in this way, it is somehow tempting to draw an analogy to the current situation. Therefore, let’s return to the royal chronicles and the narrative around goddess Kant Debi one more time. After a low-caste Pano found the goddess in his field while ploughing, he took her home. A moneylender (*mahajan*) who wanted to collect the loan he had given to the Pano, waited for him in the Pano’s house watching the threshing floor where the Pano had spread paddy to dry. The Mahajan noticed that

as soon that as soon the birds started to peck at the paddy, a snake would come out of the sama [metal part of the grinder / the idol of the goddess] and drive them away. An idea came to him to ask the Pana for the same [...] the mahajan kept sitting there and said that he would not leave unless the Pana returned his money. Then the Pana winnowed the paddy and got rice from it. To the mahajan’s surprise he got the same quantity of rice as much as he had paddy. The mahajan then again asked for the sama telling him that he will relieve the Pana from his loan if he gave it to him. (Pramanik, Skoda 2013, 40)

Finally, the Pana gave in and the Mahajan took possession of the metallic *sama*. But “[t]he same night the mahajan had a dream that, if he did not return the sama to where it belonged his clan (*bansa*) would be wiped out” (Pramanik, Skoda 2013, 40). In further dreams of the Pana, the king and the Bhuiyan, it was revealed that the *sama* or rather Goddess Kant Debi wished to stay in the hills and shall be worshipped by the Bhuiyans rather than being in the hands of a money-lender.

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Environmentalism and Sustainability as an Expression of Islamic Morality

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Abstract The present essay relates to a line of enquiry that focuses on the Islamic contribution to the values held in common by different cultural traditions, with the aim of working towards a shared ethical conscience and peaceful coexistence in the cities of a globalised world. The essay emphasises cultural specificities, starting with the terminology currently used to describe environmentalism and sustainability. Drawing on the works of a number of contemporary Arab Muslim intellectuals, my enquiry aims to look at environmental sustainability from an Islamic perspective, and to address it as part of the ethical heritage of Islam.

Keywords Islam. Sustainability. Environmentalism. Islamic law. Divine names.

Summary 1 Talking About Environmentalism and Sustainability. – 2 Environmental Sustainability and Islamic Law. – 3 Environmental ‘Corruption’. – 4 ‘Islamic Precedence’ and the *muhtasib*. – 5 From the Prophetic to the Divine Example. – 6 Conclusions.



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1 Talking About Environmentalism and Sustainability

When we cross from one language into another, we never say quite the same thing (Eco 2003, *passim*) – so much is evident from the etymology of words. Let us take as an example the English word *environment*, and its derivative *environmentalism*, and the Arabic equivalent *bī'a* – also in the constructions *difā'* or *munāṣarat* or *ri'āyat al-bī'a*, all meaning 'defence or care of the environment'. *Environmentalism*, in the ecological sense, is first recorded in the early 1970s¹ and derives from the French *environnement*, which describes the action of surrounding something, and the etymology is similar in most European languages, both Romance and others: for example, the Italian *ambiente*, from the Latin verb *ambīre* 'to encompass', or the German *Umwelt*, composed of *um*, 'around' and *Welt*, 'world'. Diversely, the Arabic *bī'a* signifies 'a (place of) residence, a home', wherever it is that we return to: the great medieval dictionaries give *manzil* as a synonym – the place where you dismount after a ride. The term *bī'a* does not appear in the Qur'an – the bedrock of the Arabic language as well as of the Islamic faith – but the verbal root from which it derives, *bw'*, does often occur, as when used to say, for example, that the Jews settled in a 'safe haven' according to God's will, or that the Prophet's Companions, having been persecuted by the Meccans, found a warm welcome in Medina, or in Abyssinia, or that the blessed abide in Paradise among a thousand delights; or again, with a certain eloquence, that Abraham was given an abode in the precincts of the House of God, that is, in the Kaaba.² In so far as the root *bw'* centres on the idea of return, it has a synonym in *rj'* 'to return'. Furthermore, the ancient lexicographers tell us that it could also mean equal restitution or fair exchange, or even have to do with vendettas or blood money (Lane 1863, 270-2).

One might ask why, when talking of environmentalism in today's global world, Arab intellectuals and activists use the term *bī'a*, which stands, as I have said, in the first instance for 'home' or resting-place or retreat, instead of having recourse to nearer linguistic equivalents to environment, such as those deriving from the root *aḥṭ* (*muḥiṭ?* *muḥiṭiya?*).

In any case, it is clear that *environment* and *bī'a* presuppose two different conceptions of being a person in the world. In one, he or she is at the centre as a sort of absolute, surrounded by everything else, which is nevertheless external to him/her; in the other, he/she is within a world, where he/she has been put and which welcomes

1 <https://www.etymonline.com/word/environmentalism> and <https://www.macmillandictionaryblog.com/environment>.

2 Sequentially: Q 10, 93; 16, 41; 29, 58; and 22, 26.

him/her, and which is also of equal weight to him/her: they deserve each other, as it were.

More eloquent still is the comparison between *sustainability* and *istidāma*, the latter being the term most commonly used for the former in Arabic, both in the environmental and in other senses.³ *Sustainability* derives from the adjective *sustainable*,⁴ which in its turn is from the Latin verb *sustinēre*, whose prime meaning is ‘to hold something or someone up, bearing the weight from underneath’. In the neo-Latin languages (and others), the derivatives of *sustinēre* insist on effort and difficulty, on holding out against adversity, or an enemy: what is being sustained is an unwelcome weight, an encumbrance, most often a material one.

Sustainability is then the capability of bearing something, and has to do with weighty commitment and suffering.⁵

Let us now look at *istidāma*. The word does not appear in this form in the Qur’an, but we do find there the root *dwm*,⁶ indicating persistence and insistence,⁷ the enduring nature of a state of affairs,⁸ permanency.⁹ Medieval Arabic dictionaries record the term *istidāma* as having the same connotations and they gloss it with reference to the whole semantic range of duration words: continue, exist or remain for a long time, incessantly, constantly, always (cf. *dā’im^{an}*), in perpetuity (cf. *dawām*) (Lane 1863, 935-8). The invocation *astadīmu li-llāh ‘izza-ka* (I pray that God preserve always your power) is cited as an exam-

3 Alongside other less common terms, such as *daymūma*, from the same root *dwm*, or *istimrāriya*, this last very similar to *istidāma* in that it shares the same sense of continuity and endurance.

4 Recorded from 1845 in the sense of ‘defensible’ said of an accusation or a theory; cf. <https://www.etymonline.com/word/sustainability> e <https://www.etymonline.com/word/sustainability>. The expression “sustainable growth” first appeared in 1965, while the particular idea of ‘environmental sustainability’ was introduced in 1972, during the first United Nations Conference on the Human Environment, known as *The Stockholm Conference*. In 1987, with the publication of *Our Common Future*, a report from the World Commission on Environment and Development set up by the UN and chaired by G.H. Brundtland, a definition of “sustainable development” as “development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs” was established.

5 This meaning can be found, for example, in the use of the verb *sostenere* by Dante Alighieri, the ‘father of the Italian language’, the romance language closest to Latin: “hold up” (*Inf.* XVII, 96), “hold over” (*Purg.* XXX, 121); “help”, “protect”, “defend” (*Conv.* XXVI, 10); but also “bear” (*Inf.* XI, 87; *Purg.* XI, 137), “suffer” (*Vita nuova* III, 7; *Rime* LXVII, 60) and finally, again, “bear” in the eloquent line: “la morte ch’el [Dio] sostiene perch’io viva” (the death he bore that I might live) (*Par.* XXVI, 59). See https://www.treccani.it/enciclopedia/sostenere_%28Enciclopedia-Dantesca%29/.

6 https://www.altafsir.com/Quran_Search.asp?LanguageID=1

7 Q 3, 75 (when asking for something); 70, 23 (when praying).

8 Q 5, 24 (the presence of giants in the promised land); 5, 96 (the condition of sacredness); 5, 117 (Jesus’s span on earth); 19, 31 (length of Mary’s life).

9 Q 11, 107-108 (of the earth and the skies); 13, 35 (of food for the blessed).

ple, as well as the more prosaic *istadāma lubs^a ath-thawb*, (he wore the same clothes constantly). Another example, *istadamtu ‘āqibat^a al-amr* (I postponed the conclusion of the deal for a long period), introduces a figurative sense of acting with patience and calm, watching where you tread. Finally, in such a line of verse as *fa-lā taj’al bi-‘amrika wa-stadim-hu* (hurry not, but take your time), *istidāma* can specify the ability to wait, the opposite of rushing. The synonyms offered are *baqiya* (continue, stay), *thabata* (persist, insist), *imtadda* (be extended, prolonged in time), *intazara* (wait, be patient, act with circumspection) and *raqaba* (examine, study carefully). Given these connotations, which link to duration and not the burden sustained, *istidāma* appears in many expressions that have nothing to do with sustainability in its modern technical sense, such as *istidāmat al-awrāq* or ‘permanence of foliage’ in evergreen plants (Lane 1863, 937).

While in practice resulting in symmetrical procedures and comparable courses of action, *sustainability* and *istidāma* also testify to two different visions of man in today’s world and the role he plays in it. And again we can ask whether the choice of *istidāma* – as we have seen: ‘conserve, maintain in the long term, or forever’ – instead of loan translations of *sustainability* – for example, derivatives of the root *da’m*: *muda‘amiya*? – was deliberate or spontaneous. It is nonetheless the case that, whereas *sustainability* implies that we must take on the burden of our surrounding abused and worn-out environment, *istidāma* speaks of a possibly unchanging nature, which it is our duty to leave as we find it.¹⁰ And whereas *sustainability* starts now, and concerns future generations from here on, *istidāma*, characterised by a long view of time, contains also a retrospective element and looks simultaneously to the past and the future, one generational cycle after another, in the essential immobility of a perpetual present that is God’s time. The medieval lexicologists point out that *dwm* also expresses a circular movement, which is relatively maintaining one’s position, and give as an example the vulture that *dawwama* when it circles above its prey; while *istadāma* indicates the kind of flight that exploits the air currents and allows the wings to remain immobile.¹¹

10 The notion of ‘environmental conservation’ is by no means alien to Western thought, but it belongs particularly to the initial phase of ecological thinking. A pioneering example is the journal *Environmental Conservation*, founded in 1974 and still published by the Cambridge University Press for the Foundation for Environmental Conservation in Geneva (<https://www.cambridge.org/core/journals/environmental-conservation>).

11 So that the very common Arabic expression for ‘sustainable development’ – *tanmīya mustadāma* – can sound something of an oxymoron.

2 Environmental Sustainability and Islamic Law

According to a number of contemporary authors from various backgrounds and schools, the environmental degradation that we have to deal with today can be traced back to the foundational texts of Western civilisation, to the biblical heritage in fact¹² and specifically to the 'dominion' over nature that God conceded to man according to the first chapter of the Genesis.¹³ An observation that might easily be extended to the Qur'anic tradition,¹⁴ except that the Arab Holy Book tempers the anthropocentrism by constantly reaffirming the divine lordship over all things,¹⁵ alongside a human *khilāfa* or 'vice-regency', entailing man's right to benefit from creation¹⁶ as a usufruct or trusteeship.¹⁷

Those Muslim scholars who regard environmental sustainability through a religious lens and consequently insist on the conservation of the natural world as an Islamic duty, are increasingly numerous.¹⁸ Among them, we find a female voice, that of the Algerian economist Saliha Ashi, in a 2019 essay entitled "Protection and Care of the

12 Kula 2001, 1-9; White 1967, 1203-7; Toynebee 1972, 141-6; McHarg 1964, 2-12; Afzaal 2012, 239-62.

13 "And God blessed them, and God said unto them: Be fruitful, and multiply, and replenish the earth, and subdue it: and have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth" (1,28). For the Christian response, see again, among others, Kula 2001.

14 On the controversy regarding anthropocentrism in the Qur'an, may I direct the reader to (Zilio-Grandi 2019, 399-414).

15 See *li-llāh mā fī as-samawāt wa-mā fī l-ard*; Q 3, 109, 129, 180-9; 4, 126, 131-2, 170-1; etc. (God is "the Irresistible Subduer", *al-Qāhir*, in Q 6, 18; 38, 65; 39, 4; 40, 16; 59, 23).

16 Cf. "*la-kum*", Q 2, 267; 16, 5; 36, 73; 40, 80; and "*ālā*" in Q 55 *passim*.

17 "Trusteeship" according to the alternative, halfway between religious and secular, known in fact as *i'timāniya*, "*trusteeship paradigm*", proposed by the Moroccan philosopher Taha Abderrahman (b. 1944). On this see particularly the studies of Hashas 2015 and Hashas, Al-Khatib 2020.

18 And still underconsidered by Western pronouncements on the subject. Among those in English I would signal (Izzi Dien, 2000 33-52); in the latter, the author takes his cue from the thought of Sayyed Hossein Nasr, Muḥammad ibn al-'Uthaymīn and 'Alī Jum'a. Again in English (Rizk 2014, 194-204).

Among those in Arabic, I note especially the pioneering Al-Ḥakīm, Al-Laṭīf aṣ-Sa'īdī 1994. And then Al-Zayyādī 2009, 219-52; Al-Khiḍḍī, Samāra 2009, 71-89; Sway 2012 at <https://www.qscience.com/content/journals/10.5339/reIs.2012.environment.26>; (Al-Kaylānī 2014, 1209-28); Bin Hamza 2016; Zafar 2019. Interesting too Schwencke 2012 (<http://ppi.unas.ac.id/wp-content/uploads/2015/01/report-globalized-eco-islam-a-survey-schwencke-vs-24-february-2012-pdf.pdf>). I would also signal the useful mapping of the environmental issue in the Qur'an in Helfaya, Kotb, Hanafi 2018. Also useful on ecological movements in the Islamic world is Vincenti doctoral thesis (Vincenti 2016), which can be consulted at <https://iris.luiss.it/handle/11385/201123#.YQDUXR1S9E4>. Finally, the very recent Idlālène 2021, which is, however, almost wholly based on a Western bibliography.

ing and caring (*hifāz, ri'āya*) for the world. Point by point, and always scrupulously backing himself up with quotations from the Qur'an and the Sunna, the author explains that environmentalism forms an important part of the ethical values and behaviours (*qiyam akhlāqiyya, sulūkiyyāt*) instilled by faith (165-6); that the principles and methods of the law (*fiqh*), augmented by the practical experience of the jurists, are sufficient to resolve all the great ecological issues (166-7); and that the conservation of the environment fits perfectly with the five fundamental pillars of the religious law (*maqāsid al-sharī'a*), which are: the safeguarding of the faith, the person, the intellect, lineage and money (*dīn, nafs, 'aql, nasl/ird, māl*) (169). He closes his discussion with the hope of a greater involvement of religious institutions in the search for solutions appropriate to the challenges of our time, with an emphasis on the concept of 'social responsibility' (*mas'ūliya mujtama'iyya*) (170).

3 Environmental 'Corruption'

In pursuing his theme, al-Wanda dwells on the Qur'anic contrast between *islāh*, 'emendment or correction', and *fasād*, 'corruption'²³ (Al-Wanda 2019, 168-9), the latter being a term frequently used nowadays to cover environmental degradation, as also pollution (technically *talawwuth*); and he cites the (again Qur'anic) prohibition of wreaking 'corruption upon the earth' (*al-fasād fī l-ard*), referencing, *inter alia*, the surah of the Heights: "Cause not corruption upon the earth after the fair ordering thereof (*ba'd islāhi-hā*)" (Q 7, 56).²⁴ By giving both terms, *fasād* and *islāh*, 'corruption' and 'correction', a deftly ecological reading – bypassing, as many modern commentators are prone to, a long exegetical tradition that interprets them principally in relation to faith as acceptance or refusal of the divine Word – al-Wanda manages to comfortably include the conservation of the environment among the ethical imperatives of the Islamic religion.

There is another essay on the same themes by the Egyptian educationalist and linguist Muḥammad Jābir Qāsim²⁵ (2007, 117-37), where what strikes one particularly, as indeed in many other cases,

²³ Or *ifsād*.

²⁴ He also points to Q 7, 85: "O my people [...] fulfil the measure and weight and do not deprive others of their due and cause not corruption upon the earth after its reformation". "Corruption upon the earth", as something specifically forbidden and as a behaviour typical of the wicked, appears dozens of times in the Qur'an: Q 2, 11; 2, 27; 2, 30; 2, 60; 2, 205; 5, 32-33, 64; 7, 56; 7, 74; 7, 85; 7, 127; etc.

²⁵ The author frequently backs up his argument with quotations from another Egyptian thinker, the above-mentioned aṣ Ṣa'īdī, *Al-bī'a fī l-fikr al-insānī wa-l-wāqī' al-imānī* (The Environment in Human Thought and in the Faith). I note here a more recent work

is the vast expansion of the notion of 'environment' (*bī'a*) that his argument embraces:

the sum of things that surround man, from the earth that sustains him to the heavens that overarch him, including every force and agent between the two, everything that penetrates deeply into the human soul [...] This is so, because Islam is not limited to material things and their exterior forms, but makes them instruments for the purification [*taḥhīr*, *tazkīya*] of the soul – and here lies the uniqueness of Islam – that soul which, as God has promised, “he who makes pure will have success, and he who corrupts will fail” (Q 91, 9-10). (Qasim 2007, 120)²⁶

Under Islam – Muḥammad Jābir Qāsim continues – the environment is a living, vibrant entity, equipped with emotions and feelings, and perfectly balanced in its proportions. God has placed man in this environment and instructed him not to abuse it [*fasād*] because disturbing its order and equilibrium will damage not only the environment itself but also man who is part of it. The importance which Islam attributes to the environment derives from the sanctity [*qudsiyya*] of Him who created it, He who stands behind the sanctity of Islamic sources, of the principles which underlie the religion and the credo rooted in the hearts of believers. On the basis of this sanctity, respect for the environment is a constituent element of the faith [*īmān*]. (122)

Another interesting aspect of Qāsim's work is his extension of the concept of 'pollution' (*talawwuth*). In the scheme proposed by the author, pollution can be subdivided into water, atmospheric, food, aesthetic and noise pollution. Especially worthy of mention is his treatment of food pollution, which, in taking the reader to the heart of Islamic law and to the fundamental legal categories of the allowed and the forbidden (*ḥalāl*, *ḥarām*), underlines the holistic nature of Islamic law:

Whether it be of animal or vegetable origin, God has allowed [*aḥalla*] what is good, and forbidden [*ḥarrama*] what is bad [see Q 2, 172-3]. Islam also forbids the adulteration of foodstuffs and the sale of expired products. Deaths resulting from food poisoning, being the consequence of 'corruption upon the earth', are regarded as homicides. This was the reason for the creation in times

in the same spirit, with many references to the classical literature: Murad 2017 (<https://journals.qu.edu.qa/index.php/sharia/article/view/65/65>).

26 Translation from Arabic by the Author.

past of the role of *muḥtasib*,²⁷ one appointed to oversee the markets and monitor the safety of the goods for sale.²⁸ (Qasim 2007, 129-30)

As far as aesthetic pollution is concerned, Qāsim too returns to the beauty and harmony of creation, man's ability to perceive that beauty and the joy it kindles in him. He notes that man should not compromise the beauty of the world, which includes his own, and explains that among the elements that go to make up human beauty are the cleanliness and purification (*naḡāfa*, *ṭahāra*) of one's person. By this route he doubles back to the ethical/juridical sphere, to the legal purity demanded of the Muslim before any devotional act, to the necessity of full ablution (*ghusl*) every Friday,²⁹ and thence to the cleaning of clothes, houses and streets, so that they are pleasing both to man and to the Lord (131).

Also of relevance to Qāsim's work is the famous Qur'an passage on Adam's vice-regency:

And when thy Lord said to the angels, "I am setting in the earth a viceroy", they said: "Wilt thou place therein one who will do harm therein and will shed blood?" [...] He said: "Surely I know that which ye know not". And He taught Adam the names of all things and he presented them unto the angels and said, "Now tell Me the names of these, if you speak truly". (Q2, 30-31)

The author reminds us of the perfection of the divine knowledge and explains that God, well aware that man would in due course corrupt the earth, had instilled in him some fragment of his own knowledge so that he might use it one day to make good (as in *iṣlāh*) what he had ruined (as in *fasād*). Seen thus, environmental degradation can itself be understood as part of the divine plan, and man's knowledge, superior to that of the angels as God had willed it, would provide the means of resolving the problem (Qasim 2007, 122).

27 From *ḥisba*, a term used partly to indicate the duty of every Muslim to "promote the good and prevent the bad" and partly for the functions of the person appointed to apply this dictum in a given city. This will be explained further below.

28 His argument continues with a series of Prophetic sayings on the cleaning of kitchen utensils.

29 On the basis of the well-known Prophetic saying reported by al-Bukhārī on the authority of Salmān al-Fārisī: "Man should perform a complete ablution on Fridays and purify himself as best as he can, and anoint himself with his ointment...".

4 'Islamic Precedence' and the *muḥtasib*

Again devoted to 'corruption upon the earth' is an essay by the Moroccan sociologist and educationalist Mawlay al-Muṣṭafā al-Barjāwī published in 2011.³⁰ This is an even broader understanding of what constitutes 'the environment', which includes the fields of economics, politics and technology; and similarly wider is his definition of pollution as "the occurrence of any change in environmental wellbeing through corruption, excess, waste, devastation and disfigurement" (*ifsād, isrāf, tabdhīr, takhrīb, tashwīh*). But essentially the emphasis is on a vision of the pervasiveness of religious Law, which oversees both the exterior and interior aspects of man, to the extent that the author ends by putting environmental pollution and climate change on the same plane as moral corruption, desertification and deforestation as deceit and treachery, the exploitation of the earth's resources as gambling and usury, everything bundled together under the umbrella of 'excess' (*isrāf*), exceeding and transgressing, that is, the limits laid down by God. All with a fiercely negative view of the impact of man – especially Western man – on the world of today, and a continual insistence, often in quite polemical tones, on 'Islamic precedence' in environmentalist terms. He writes, for example:

The West boasts [...] of having [...] led the way with its concern for environmental issues. Yet, whoever has studied the Book of God and the Sunna of the Prophet (pbuh) will see that Islam with its prescriptions was actually the first to lay the foundations and build brick by brick a response to all environmental questions, great and small, about which environmental and intergovernmental organisations continue from morning to night to emit slogans and hold conferences – the Tbilisi Conference, the Rio di Janeiro Conference, the Kyoto Conference, the Johannesburg Conference – all in vain. (al-Mustafa al-Barjawi 2011, s.p.)

Respect for the environment, al-Barjāwī concludes, does not mean that the Muslim is called upon to live in the wild, turning his back on civilisation and scientific progress, but that he should respect the limits and proportions (*qadar, miqdār*) of the world and treat nature in a moral and gentle way (cf. *adab, ḥanān*).

Islam's claim to precedence in environmental matters, together with denunciations of the Western way of life – considered to be at the root of the widespread contemporary ecological degradation – are threads running through many works, among them a fine 2017 essay by the Yemeni economist 'Adil 'Abd ar-Rashīd 'Abd ar-Razzāq fo-

³⁰ Downloadable at <https://www.alukah.net/culture/0/36923/>.

ocusing on the Sunna of the Prophet (2017). The author maintains that the reason why Muslim societies are (also) afflicted by environmental problems is that they blindly imitate the failings of others, thus betraying the respect for the Earth required by Islamic law. It is essential therefore to return to the 'Prophetic way' and reclaim the benefits that come with it; to promote an environmentally educational methodology based on the teachings of the Prophet, which could call itself truly Islamic. Applying such a methodology would not in fact be difficult – he argues – since it is fundamentally a religious obligation (*ilzām dīnī*) (176-9).

In 'Abd ar-Razzāq's essay there is a stimulating section dedicated to *ḥisba* – the duty of every individual to enjoin what is right and forbid what is wrong³¹ – as a system of control, as 'environmental monitoring' (*raqāba bī'yya*). Taking his cue from the early Aleppo jurist ash-Shayzarī (d. 589/1193) and the Egyptian traditionist Ibn al-Ukhuwwa al-Qurashī (d. 729/1329), the author directs our attention to the legal personage who was essentially the incarnation of *ḥisba*, the *muḥtasib*,³² a municipal functionary charged with overseeing the moral behaviour of the citizenry, particularly with regard to bazaars and trade. He details the practical and technical responsibilities of this official, and his different competencies, at once administrative and religious: alongside keeping an eye on weights and measures and on prices, being alert to fraudulent practices as and ensuring unimpeded circulation on the roads, the *muḥtasib* also, for example, subjected bakers to a strict regime of personal hygiene on top of requirements for the cleanliness of their premises, their ingredients and the tools of their trade; he obliged keepers of animals to give them sufficient fodder and rest, and not burden them with excessive loads; he saw to it that butchers and farriers did not cause animals unreasonable suffering and forbade castration; he also barred ram- and cockfighting. 'Abd ar-Razzāq proposed a reinstatement and reinforcement of *ḥisbah* as a solution to inadequate environmental policing in the Arab and Islamic world, along with a reinvention of the *muḥtasib* in modern guise, a 'sustainability officer' charged with monitoring the environment and seeing that the Prophet's teachings are respected in the ecological sphere.

31 Cf. Q 3, 104; 3, 110 and 3, 114; 7, 157; 9,71 9, 112; 22, 41; 31, 17.

32 Cf. s.v. "Ḥisba". *Encyclopaedia of Islam*. http://dx.doi.org/10.1163/1573-3912_islam_COM_0293.

5 From the Prophetic to the Divine Example

Sharia - writes 'Abd ar-Razzāq elsewhere - asks us to treat [*adab*] nature with the maximum courtesy [...] in all its parts, and to be good towards her, to be alive to her sufferings and to love her as she loves us. (2017, 169)

He reminds us of man's assimilation into his environment quoting the famous Prophetic saying "the palm tree is like the Muslim", and also the well-known "Story of the ship" (*ḥadīth as-safīna*), which compares those who exceed the limits set by God to one who, in order to obtain some seawater more easily, makes a hole in the hull, bringing disaster to himself and his fellow passengers, themselves at fault for not having stopped him. The many sayings quoted by the author, commented on and applied to modern life by utilising 'analogy' (*qiyās*) - the legal principle based on similarity of circumstances (149-62) - often have a general valency, for example "God has ordained goodness [*iḥsān*] in all things", "the Earth has been entrusted to me like a mosque and like purification [*masjid wa-ṭahūr*]", and "there is a reward for every moist liver", the celebrated saying that enjoins compassion for all living things. But others are more specifically focused on the protection and fair distribution of the water supply, respect for animals, cleanliness of the streets, the fight against disease and epidemic, including the imposition of quarantines, and noise pollution. Some examples: "removing a hazard from the street is one of the branches of the faith", "do not corrupt water, though you be at a flowing river", "do not curse the wind", also "do not curse the cockerel". Finally, "Uhud is a mountain that loves us and we love it", which teaches us not only to protect the natural world but to love it. 'Abd ar-Razzāq thus ends up by supplying a whole treatise of environmental education under the Prophet's guidance (163-76).

Among the numerous sayings reviewed from an environmental perspective, two in particular stand out because they reference the 'Beautiful Names' (*al-asmā' al-ḥusnā*), the qualities that traditional Islamic theology attributes to God on the basis of the foundational texts, specifically: "God is the Beautiful and he loves beauty" (*al-Jamīl yuḥibbu al-jamāl*), and "God is the Kind and he loves kindness" (*ar-Raḥīm yuḥibbu al-riḥq*). The author, then, by means of the Prophet's words calls on the believer to respect the beauty and fragility of the world, but the example he points to is not that of the Prophet, but that of God himself - a distinction worth noting, because by so doing, even if he does not labour the point, he places environmentalism squarely within the framework of the Islamic ethics of virtue.

In fact, while it is true that the Muslim should always model himself on Muhammad, it is also true that the peculiarity of the moral, as opposed to the legal sphere, lies in its having for a model *muta-*

tis mutandis no less than ‘the supreme example’ (*al-mathal al-a‘lā*, Q 16, 60) of God himself and his attributes. The notion that the Islamic ethics of virtue are inspired by the divine Names, and by the imitation of God, for all his obvious inimitability, finds its origin in those cases where the Qur’an or the Sunna acknowledge the same qualities in God and in humankind. Thus, for example, we find gratitude (*shukr*) numbered among the cardinal virtues, because the Qur’an applies *shakūr* both to God, “the All-forgiving, the All-thankful” (Q 35, 34; 42, 23; 64, 17) and to the good believer (Q 14, 5; 31, 31; 34, 19; 42, 33). The medieval theologians defined such divine attributes ‘ambiguous’ (*mutashābiha*) or ‘shared’ (*mushtaraka*), precisely because they can be transmitted to humanity to the extent that God wills or permits;³³ an idea that is also to be found in Christian theology in the form of ‘communicable divine attributes’.

Also to be found among the divine Names is *al-Ḥafīz*,³⁴ ‘He who preserves many things’, ‘the Protector’ or ‘the Guardian’: a ‘shared’ name, in so far as the Qur’an employs it several times in relation to God, who is “the best Guardian” (Q 12, 64),³⁵ but also applies it to human beings: among men dubbed ‘guardians’ are the Prophet³⁶ and Joseph son of Jacob, the ‘wise guardian’ of the Pharaoh in Egypt (*ḥafīz ‘alīm*, Q 12, 55); also ‘guardians’ are the blessed in paradise (Q 50, 32) because they have been able to defend their own adherence to the faith, while the Qur’an itself is a “book that guards/preserves” (*kitāb ḥafīz*) (Q 50, 4).

When glossing *al-Ḥafīz* in his famous work on the Names, the medieval theologian and philosopher al-Ghazālī (d. 505/1111) pens a hymn to the biological, chemical and physical perfection of the environment. He tells us that the divine ‘guardianship’ (*ḥifẓ*) means that God preserves on the one hand the existence and permanency of things, and on the other He sustains natural enemies and opposites, each against the power of the other, like water and fire, or heat and cold, or the wet and the dry, which, but for divine intervention, would obliterate one another. God looks after all living things, people, plants and animals, maintaining a balance between their components, regulating oppositions, adding and recreating, and ultimately preserving every single atom on earth and in the heavens. As for the *ḥafīz* man, al-Ghazālī explains that he is one who guards himself, in his body and his heart, observing his religion, preserving himself from attacks of anger, from the lure of desire, the deceits of the animal soul and the machinations of devils. Because man, he writes:

33 See, for example, Zilio-Grandi 2020, 12.

34 At no. 38 in the most widely recognised lists.

35 See also Q 11, 57; 34, 21; 42, 6.

36 Q 4, 80; 6, 104 and 6, 107; 11, 86; 42, 48.

“stands at the edge of a precipice, surrounded by these many perils that would lead him to ruination” (Al-Ghazālī 1971, 119-23) (cf. Stade 1970, 76-80).³⁷

Another eminent medieval theologian who concerned himself with the divine Names and their potential transmission to the virtuous man was Fakhr al-Dīn ar-Rāzī (d. 606/1209). In his work on the Names we find another interpretation of divine tutelage, which is preservation from oblivion, linked to the divine knowledge (*‘ilm*); ar-Rāzī explains that God is *al-Ḥafīz* not only because He protects things from dissolution but also because He remembers everything, and therefore knows everything permanently, both in general and in particular. He then applies *ḥafīz* to men and describes the *ḥafīz* man as one who safeguards his own rational capabilities from suspicion and heresy, and his practical capabilities from the twin assaults of lust and anger, knowing that virtue (*faḍīla*) lies in the middle way. Therefore, one must walk by a straight path deviating neither to one side or the other, a path that some follow lightning fast while others toil ahead among a thousand difficulties.³⁸

An ethical-ecological interpretation of the Name, and its possible translation into the Islamic virtue of ‘environmental awareness’ is indeed a long way from the medieval and early modern theological sensibility, nor indeed is there much sign of it even today. And yet, deploying the resources of Islamic theology and working under the guidance of the masters of the past, it is actually simple enough, exactly through meditating on this Name, to predicate the ‘Islamness’ of environmentalism and sustainable behaviour.

What is surprising is that the various Arab authors cited so far, when they insist on conservation and the guardianship of the world after the Prophet’s example, have continual recourse to terms deriving from the same verbal root as *al-Ḥafīz*, such as *hifz*, *ḥifāz* or *muḥāfaẓa*, all deputed to mean conservation, but do not take the next vital step. One might object that their background tends to be juridical or other rather than theological, were it not that we observe the same omission among theologians. An example is Yūsuf al-Qaradāwī (b. 1926) in his well-known 2001 essay *Caring for the Environment in Islamic Religious Law*.³⁹ An ecological reading of the Name *al-Ḥafīz* does not seem to have been attempted even by those preachers who take the Names as models for human virtues, as is the case with the Syrian Muḥammad Rātīb an-Nābulusī (b. 1939) in his *Encyclopaedia*

³⁷ See <https://www.ghazali.org/books/Ghazali-99-Name-of-God.pdf>.

³⁸ <http://ar.lib.eshia.ir/12180/1/369>, vol. 1, 263-6.

³⁹ Downloadable at <https://www.al-qaradawi.net/node/5064>. Cf also Qaradāwī 2010.

of the Beautiful Names.⁴⁰

6 Conclusions

The contemporary Arab Muslim authors pushing for increased environmentalist thinking from a religious perspective are becoming more numerous throughout the MENASA area. It is one of the principal aims of this essay to provide a platform for these authors, too often ignored in the West because of the relative inaccessibility of their chosen linguistic medium.

Their works have certain basic convictions in common. First of all, the position of man in the world, which is viewed as internal (as in *bī'a*) rather than separate (as in *environment*). Secondly, a specific conception of sustainability, based on the permanence of the world (as in *istidāma*) and not the burden that its maintenance imposes (as in *sustainability*). The unregulated exploitation of natural resources is seen as 'excess' (*isrāf*), and excess is directly contrary to the principles of Islam - "God does not love those who exceed the limits" (Q 2, 190) - and to its cardinal virtues, moderation and equanimity (*wasāṭiyya*, *tawāzun*). Our ongoing degradation of the environment is assimilated to the Qur'anic expression "corruption upon the earth" (*fasād fī l-ard*), something sternly prohibited, although part of the divine plan. God has equipped man with a brain precisely to enable him to tackle it (cf. Q 2, 30). Making good the inevitable corruption of the world and returning it to its pristine state (as in *islāh*, 'rectification') are therefore ethical imperatives demanded by the Islamic religion.

Another recurrent theme is that of 'Islamic precedence' in the environmental field. All the authors state, or simply assume, that *sharī'a* - the ethical/legal teachings contained in the Qur'an and the Sunna - ensures the environmental awareness of the believer and provides him with all the necessary tools to live respecting, and loving, nature. This means that the Prophet's teachings preceded Western ecological ideology and its political programmes by many centuries,⁴¹ and thus, if the Islamic world is also afflicted with ecological problems, this is due to the adoption of styles of life at odds with the autochthonous cultural tradition. It is essential, then, to re-

⁴⁰ An-Nabulusi 2014, 71-93 (commentary on *al-Ḥafīz*). The Kurd Said Nursi (d. 1960), although convinced that the Names can be transferred to the natural world, man included, and perhaps the first Muslim thinker to reveal the environmentalist component in the foundational texts of Islam, is none the less no exception; see Nursi 2010, 655-60 (<http://www.erisale.com/index.jsp?locale=en#content.en.201.619>), and Sempo, Khosim 2020, 107-32.

⁴¹ Clearly the 'environmental' cultural heritage of the Christian West is itself insufficiently known.

turn to the 'Prophetic way', spreading as widely as possible an Islamic alternative to Western ecology, one which, constructed on the firm foundations of the faith, will be seen as a religious obligation (*ilzām dīnī*). Within such an alternative it has been proposed that *ḥisba* – the Qur'anic duty to promote right and prevent wrong – be re-established and the personage associated with it, the *muhtasib*, be reinstated in a new kind of sustainability official.

Despite a frequent recourse to religious sources, the cultural provenance of these authors is generally not strictly theological. Indeed, a survey of recent Arab texts on environmentalism reveals an almost complete absence of theological discussion (*'ilm al-kalām*) of the subject,⁴² with the result that missing from contemporary discourse is, among other things, the *mutatis mutandis* human translation of the Divine Name deputed to express conservation, *al-Ḥafīz*, which, in portraying an 'environmental' aspect of God, furnishes a textual basis for promoting the associated Islamic virtue.⁴³ Suggesting this approach has been another aim of the present essay.

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42 This may well be due to the preponderance of law over theology in modern Islamic education. Louis Gardet's contribution, *'Ilm al-Kalām*, in "Encyclopaedia of Islam", Second Edition, remains relevant: "In the universities of Muslim countries the faculties of religious sciences are called *kulliyāt ash-shar'ia*, a term generally rendered by "Faculties of theology"; *fiqh* is there taught as much as, if not more than, *kalām*. *Kalām*, based as it is upon its function of defensive apologia, does not hold the leading place in Muslim thought that theology does in Christianity".

43 Just as, among other things, there is no focus on the apocalyptic dimension of the divine punishment of 'corrupters' cf. Q2,12; 5,33 and 64,7,85-86 and 103; 10,81, 29,36; etc.), nor the habitual behaviour of God (as in *sunnat Allāh*) who "changes not" (cf. Q17,77; 33,62; 35,42; 48,23).

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Cunning as... a Wolf Multispecies Relations Between Humans and Wolves in Eastern Siberia

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Abstract Recent anthropological reasoning fostered by the ontological turn debate, has tackled the issue of multispecies ethnography: it deals with the lives and deaths of all the creatures that for decades have stayed on the margins of anthropology. According to this approach, animals, insects, plants and other organisms have started to appear alongside humans with legibly biographical and political lives. Focused on the changing contours of the 'nature' wriggling within whatever 'human nature' might mean, multispecies ethnography recalls that "human nature is an interspecies relationship", as Anna Tsing would put it (Tsing 1995, 94). This last statement may also refer to the connections between humans and animals. In my paper I will take into account relations and connections between wolves and humans among hunters in Sakha-Yakutia, Eastern Siberia.

Keywords Multispecies relations. Human-nonhuman others. Anthroology of animals. Wolves. Siberia.

Summary 1 Introduction. – 2 Relations, Connections, Consequences. – 3 Friend or Foe? None of Them, Simply an Opponent. – 4 Conclusions.



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1 Introduction

Within the purview of the biological sciences, human-wildlife relations are apprehended as the actions resulting from people and wild animals sharing landscapes and resources, with outcomes ranging from being beneficial or harmful to one or both species. The social sciences, instead, and Cultural Anthropology particularly, advocate viewing these relations through an interdisciplinary “multispecies lens” in which humans are observed as one of the multiple organisms that interact with other species to shape and create environments (Parathian et al. 2018). In doing so, anthropologists have repeatedly challenged environmental discourses that oversimplify the complex relationship between humans and non-human species, in an “effort to destabilize the anthropocentrism that persists in the label of human-non human relations” (Kirksey, Helmreich 2010, 564).

Multispecies ethnography is a term deployed for work that acknowledges the interconnectedness and inseparability of humans and other life forms, and thus seeks to extend ethnography beyond the solely human realm. Such investigations of social and cultural phenomena are attentive to the agency of ‘other-than-human’ species. According to this approach, animals, insects, plants and other organisms, even viruses – what Agamben has referred to as “bare life” (1995) – have started to appear alongside humans with their own biographical and political lives, thus highlighting the multiple entanglements between animal species, microorganisms and socio-economic phenomena (Keck 2020). Similar understandings suggest “a more-than-human approach to ethnographic research” (Locke, Münster 2015, 1) and an “anthropology beyond the human” (Kohn 2007, 6).

Focused on the changing contours of the issue of ‘nature’, wriggling with whatever ‘human nature’ might mean, multispecies ethnography reminds us that “human nature is an interspecies relationship”, as Anna Tsing would claim (2012, 141). All this suggests that *Homo sapiens, Faber, Ludens* has, as Haraway puts it, “never been human”, or at least never only (2008). From Lestel and Taylor’s “ecoanthropology and ethnobiology” (2013) to Haraway’s “companion species” (2008), researchers have endeavoured to develop innovative frameworks to conceptualise relationships between human and non-human species (Parathian et al. 2018).

Research on multispecies, however, not only acknowledges that humans dwell in a world necessarily comprising other life forms but also contends that their entanglements with human lives, landscapes, and technologies must be theoretically integrated into any account of existence.

Deeply intertwined with the issue of multispecies is the growing interest for the topic of human-animal relations. In the past two decades there has been a marked post-symbolic turn in anthropo-

logical studies of animals: by the end of the twentieth century, animals were mainly conceived as a symbolic means used by humans in their social relations with other humans (Mullin 1999). In Lévi-Strauss' famous critique on the functionalist explanation of totemic animals (and plants), particular species "are chosen not because they are good to eat but because they are good to think" (1969, 162). Much of the subsequent anthropological work on animals has documented the human practice of thinking with or "signifying animals in different cultures" (Willis 1990, 50). Central to this structuralist approach to animal symbolism has been an emphasis on the role of classification in establishing the meanings of animals.

Since then, however, another perspective has gained traction: it rejects "symbolic reductionism" (Knight 2005b, 1) and asks anthropologists to treat animals as "*parts* of human society rather than just *symbols* of it" (Knight 2005b, 1; italics in the original). Animals, according to this view, are not simply a "symbolic resource for different human players, but rather play the role of active participants in a number of different human-animal-technical social relations" (Candea 2010, 243).

To treat animals as part of human society means dealing with them as subjects and not just as mere objects; consequently, this approach views animals, people and things (Ogden et al. 2013) on the same level: connections, relationships and engagement are the key matters of concern (Candea 2010).

Viewing non-human animals as interacting organisms endowed with agency, seen as an effect rather than the product of subjective intentionality (Latour 2005) that shape and create ecosystems, reflects the worldviews of many indigenous communities but is also embraced by the biological sciences through the issue of niche construction (Barker, Odling-Smee 2014) and that of "*naturalcultural* contact zones" (Fuentes 2010, 607; italics in the original). Augustin Fuentes (2010; 2012) and Donna Haraway (2016) consider "contact zones" the interface between animals and humans and recognise that broad species characteristics, as well as individual idiosyncrasies, are both the cause and outcome of the ways individuals act and interact. In doing so, Haraway introduces the concept of "sympoiesis", meant as "making with: nothing makes itself, nothing is really autopoietic or self-organizing [...], it is a word for worlding with, in company" (2016, 61), whereas Fuentes argues that the boundaries separating humans and animals are broken down as the overlapping ecologies of these coexisting species generate coproduced niches (2012). These contact zones, implying a shared habitat, landscape and resources between species, not only can engender conflict dynamics but can give rise to ambivalent and complex relational patterns, as the one I will illustrate in my paper.

One of these "*naturalcultural* contact zones" is Sakha-Yakutia, a Sovereign Republic of the Russian Federation in Eastern Siberia.

According to the 2010 Census, in this area different ethnic groups coexist: the Sakha-Yakut (49.9%), the Russians (37.8%), the Evenki (2.2 %), the Ukrainians (2.2%), the Even (1.6%) and Tatars (0.9%), together with other ethnic minorities such as the Dolgans, the Chukchi and the Yukagirs.¹

The Sakha-Yakut, which is the group I have always worked with, are cattle - specifically horse - breeders; however hunting had and still has a relevant role in their daily life and in the ways they relate to animals, where hunters and prey play out their roles according to a predetermined system of relationship. This is stressed by Evelyne Lot-Falck, who states that:

[m]an is but one ring of the chain. He identifies and is one with everything surrounding him. For hunting societies, like those of the Siberians, man is more intimately connected to animals. It is not a matter of superiority between man and animal: there is no substantial difference. (1953, 8)²

What Lot-Falck means when she refers to “intimate connection” is in a way not too far from Donna Haraway’s “living with” (2008) animals. In many areas of Eastern Siberia, including Sakha-Yakutia, people do not only live on animals but with animals, in such a close relationship that conceives them as non-human relatives. This entails and calls forth the idea that humans and non-human animals are on the same level to such an extent that in some Siberian contexts animals are thought to lead parallel lives to humans: they hunt, marry, have a social life that mirrors that of their human counterparts. As again Lot-Falck argues, “the animal is only one of the aspects that characterize being human, and not the least relevant” (1953, 33).

1 The Sakha-Yakut are the largest ethnic group after whom the Republic is named. They are considered semi-native, as they settled in this area from the tenth century CE; the Russians and the Ukrainians are residents resulting from internal migrations, whereas the native Evens, Evenki, Dolgans, Chukchi and Yukagirs are ethnic minorities (<https://rosstat.gov.ru/>, *Vserossiyskaya Perepis' Naseleniya*).

2 Original version: “L’homme n’est que un maillon de la chaîne. Il s’identifie au monde, il communique avec ce qu’il entoure. Chez des peuples chasseurs, comme les Sibériens, l’homme se sent le plus intimement lié avec les animaux. D’espèce humaine à espèce animale, il ne saurait être question de supériorité; il n’y a pas là de différence d’essence” (Lot-Falck 1953, 8; Author’s translation).

2 Relations, Connections, Consequences

After several years spent investigating issues connected to shamanism and its revival, during my last fieldwork in 2019 in Sakha-Yakutia, I approached for the first time the topic of the relationship between humans and non-human animals. I carried out my research with a colleague anthropologist from the University of Yakutsk between June and July in the Oymyakon district, a mountain region about 682 km from the capital city Yakutsk, in three villages: Oymyakon, Tomtor and Üchügèy. This area is occupied both by the ethnic majority Sakha-Yakut and by the native Even (Tungus in pre-Soviet literature), also called 'small indigenous groups' (*malochislennye narody*), as they count no more than 21,000 people all over Siberia. The latter were and still are reindeer breeders and at the time of my fieldwork they were all grazing, scattered along the mountainous surrounding areas. For this reason I got mainly in touch with reindeer herders of Sakha origin who are hunters too, specifically wolf and bear trappers. I also happened to have interviews with a Chukchi teacher whose family herds reindeer from the Northern village of Kolymskoe and with a biologist working in the Institute of Biology in Yakutsk. What follows are reflections and thoughts shaped on the basis of my last fieldwork experience, which at that time was meant to be a preliminary research to be pursued in the following year but that, for obvious sanitary reasons, did not occur.

The reasons why I started to carry on fieldwork on human-animals interactions and specifically on human-wolves were mainly three:

1. I realised that ethnographic accounts from native and Russian scholars, particularly those who focus on animals, rarely mention the wolf in favour of other predators that have been under constant scrutiny from a cross-cultural point of view. I am precisely referring to the bear, which for a long time has been – and still is – in the spotlight: a closer look on ethnographies within the area of Sakha-Yakutia reveals that the bear still holds a prominent position in many writings.³ In this respect, it is worth mentioning a major work by Vladimir K. Zelenin, *Tabu Slovo Narodov Vostochnoy Evropy i Severnoy Azii* (Tabooed Words in Eastern Europe and Northern Asia), published in 1929, which appears as a real compendium of an-

3 Among the main publications on bear in Sakha-Yakutia, it is worth consulting Alekseev 1980; 1984; 1992. Although these volumes do not deal explicitly with the bear but with shamanic practices, there are specific sections devoted to the cults and rituals involving this animal; see also Slepcev 1997; 2018; Medvedeva 2011. In European literature the contributions on bears from a cultural perspective are numberless: among other authors, see for example Pentikäinen 2007; Pastoureau 2007; Grimaldi 2003; Grimaldi, Nattino 2007; Comba, Ormezzano 2015.

imal tabooed names, dealing particularly with hunting practices in Western Russia and Siberia. Little attention is devoted to the wolf in favour of other animals as the bear but this comes as no surprise: as we will see later on, these two predators are often put into comparison both in literature and by the hunters themselves.

2. The second reason is that a good number of authors⁴ who have dealt with animals in my same research area have mostly devoted their attention to reindeer and consequently to herders and pastoralism. So, apparently, reindeer have been under constant scrutiny over the past 15 years, with few insights on hunting societies, represented mainly by the works of Roberte Hamayon (2010), Rane Willerslev (2007), and Donatas Brandikšauskas (2019).
3. The third, and maybe most important reason, refers to the current situation in Italy as to wolves. They are among the big-size predators, like the bear or the lynx, that have literally been wiped out from a specific area, the Alps,⁵ as a consequence of overhunting practices that led, back in 1970, to a scant amount of 100 surviving specimens in the Southern mountain areas of Gran Sasso, Sila and Maiella. It was probably from the Apennines that they gradually spread to other suitable habitats, among which the Alpine chain.

The situation, albeit very interesting and in a way promising, is far more complex than it seems. The “consequences of the return of wolves”, as is titled the volume by Luca Giunti (2021), were fostered by many factors: most notably, the injunction to freely kill them, following the 1977 and 1992 Laws “On wildlife management and conservation” and the 1992 European Council Directive.⁶ Meanwhile, the whole Italian peninsula witnessed a twofold process: on the one hand, the decline of agropastoral activities and forestry practices in alpine areas at least since 1950-60, triggered by a wider process of depopulation, prompted the gradual progression of pine woods. This resulted in the woods starting to gain ground and draw closer to the villages; on the other hand, wild species such as boars, mouflons,

⁴ Among the most prominent anthropologists who have worked in Siberia and have dealt with reindeer herding it is worth mentioning, for instance, Anderson 2021; 2017; Valikivi 2009; Vitebsky 2006.

⁵ I am referring specifically to the Western Alpine chain, as it is the area where, since 2006, I have been carrying on a parallel fieldwork to that of Siberia.

⁶ Legge 968, 1977 and Legge 157, 1992, “Principi generali e disposizioni per la protezione della fauna e la disciplina della caccia” (<https://www.gazzettaufficiale.it/>); Council Directive 94/43 EEC of 21 May 1992 on the conservation of natural habitats and wild fauna and flora (www.eur-lex.europa.eu).

deer, fallow deer, roe deer were deliberately introduced for hunting purposes. The lack of natural predators, the creation of new habitats almost free of human influence and rich in food (let us think, for instance, of abandoned grasslands and, more broadly, of rewilded woods which nowadays look like jungle-like tangles of branches), fostered the return of wildlife predators, such as wolves. In their specific case, these animals too, just like other wild species, have recently started to draw very close to villages, causing many side effects ranging from killing and eating domestic animals in households (smaller dogs, cats), to being run down by cars and, most significantly, predate sheep, goats and other flock or herded animals.

This has triggered a wide array of reactions: the attack of wolves is opposed by herders fearful of livestock losses. The regional legislation of Piedmont, the area I live in, allows herders to get a compensation for any specimen eaten or killed but does not account for the specific type of individual: be it a pregnant female, a cub, an old male, a sick female, the amount of money received is the same. As a result, this often turns into poaching, with herders taking up the rifle and shooting or claiming help from professional hunters. These conflicts, which take shape as relations of rivalry or antagonism between human beings and wild animals, typically arise from territorial proximity and involve reliance on the same resources or a threat to human well being; they are universally found but tend to be especially marked in human settlements in forest-edge regions (Knight 2000).

Another type of reaction, which also appears to be the most interesting to me, has to do with those who stand up in defence of the wolf, seeing in this animal both a powerful symbol (the wolf as 'king of the Alps', or a sacred animal in many cultures), mainly drawing from a romantic and idealised perception, and an animal that needs to be protected. The re-appearance of the wolf has actually attracted different EU funds that were channelled into specific projects addressed at studying and monitoring its movements across the Italian peninsula (*Life Wolfalps EU* is only the most recent).⁷ But, as Sergio Dalla Bernardina (2020) and Philippe Descola (2005) point out, this vision also entails the idea of a "natural model" where the wolf becomes an animal that can be eventually tamed, an embodiment of a sort of 'ani-human' being, behaving, acting and thinking like humans: a partner and, ultimately, a friend. Kay Milton defines this practice as 'anthropomorphism', a label for a *mistaken* attribution of human characteristics to animals. She also argues that in many situations that are commonly referred to as 'anthropomorphic' no particularly

⁷ *Life Wolfalps EU* belongs to EU financed LIFE programmes for environment and climate action and is an ongoing project. *Wolfalps EU* has benefitted from a double funding period: from 2013 to 2018 and from 2019 to 2024 (<https://www.lifewolfalps.eu/>).

good grounds exist for assuming that the human who is attributing certain characteristics to an animal is doing so with any reference to humanity or animality. Such cases, Milton urges, should more properly be termed “egomorphism”: it implies that “I understand my cat or a whale, or my human friends on the basis of my perception that they are like me rather than ‘humanlike’” (Milton 2005, 259).

3 Friend or Foe? None of Them, Simply an Opponent

This long but necessary premise is just to lay the groundwork of my paper and of my last fieldwork. “Ideal opponent” was a statement by Innokentij Michailovich, the biologist whom I interviewed and who works at the Institute of Biology in Yakutsk. I think this encapsulates a whole bunch of ideas on this animal and how it interacts with humans in this area of the world. The underlying idea that inspired my fieldwork and that I still hold in this paper is not to turn to Sakha-Yakutia as a model of native wisdom or folk knowledge about wolves, nor to set a cross-cultural comparison between Italy and Eastern Siberia.

My purpose, instead, was, and still is, to investigate whether the two reactions I mentioned earlier on referring to the Italian Alpine chain are experienced in Sakha-Yakutia too and which conditions determine them. The broader question is: how do people relate to this animal? Is there a tendency toward egomorphism, as Milton would suggest or do other views emerge instead? Is there a conflict between wildlife, specifically wolves and reindeer herders? This paper and the thoughts that follow wish to offer an insight on these matters, reporting how hunters, and hunters only, relate to wolves in a particular area of Siberia; however my considerations figure only as a small part of a broader project that will cover my fieldtrips in the following years, where I plan to extend my research to other interlocutors, specifically reindeer herders of Even origin too, but also people who are not directly connected to hunting practices.

“The wolf is a pest. When we see a wolf, we shoot at it”. This apparently simple statement told by Michail I. Andreev, retired reindeer herder and hunter, on which all the other interlocutors also agreed, reveals the complexity and ambivalences of the relationships between hunters and wolves. At present in Sakha-Yakutia there are more or less 10,000 specimens that in fact are considered as pest both for herders and for the public opinion: scrolling the main pages of Sakha newspapers, it is almost impossible not to bump into an article about wolf hunting. There is also a good number of hunting-oriented blogs and social networks entirely devoted to these animals that disclose a well grounded idea about how wolves should be han-

dled: “In Sakha-Yakutia wolves had it all”, “The war is still going on”⁸ and other similar headlines are among the most followed Sakha news.

From the accounts of my interlocutors, wolves are cunning and sly, and their main skill lies in unobtrusively watching and monitoring human activities, in order to ‘take advantage’ of the situation. The issue of wild fauna benefitting and adapting to humanised environments is a well documented practice, commonly referred to as “commensalism”, whereas the subsistence and use of human spaces are sometimes labelled “commensal habitats” (Southwick, Siddiqui 1994, 24). The most recurrent example of a commensal habitat is the road: when people cut down trees in a wood to make themselves a path, even to be run by vans or by *Uazik*, Soviet Land Rovers, wolves will probably use that same track for themselves without making any effort. The aspect of “making no effort” is associated to their shrewdness, which involves the ability not only to understand human thinking and talking, but also to anticipate human actions.⁹ To this extent, wolves are often compared with bears: all my interlocutors agree in maintaining that wolves are far smarter than bears, as the latter are gluttonous and “never learn from their mistakes”. In specific points of the *tayga* one can find bear traps, which consist in a narrow cabin made of piled logs that stretch upwards. Once attracted inside, bears cannot get out any more [fig. 1]. In spite of the extensive use of these traps and of the fact that bears are frequently cornered inside, they keep getting caught. According to my interlocutors, wolves would never make such a mistake: they learn where to go and are also very quick to dodge bullets, this is why hunters (or at least the ones I interviewed) rarely shoot at them, preferring to trap them; until 2018 poisonous pills were also used to catch wolves, however, since 2019 they are illegal in the whole Sakha area. The comparison with bears emerges even in terms of competition with humans for food resources. Although it is bears who are omnivorous and often get very close to houses or stores in order to steal food,¹⁰ they are

⁸ <http://www.ykt.news/>, Sakha daily news; <http://www.klub.okhotnikov.ru/>, are sites that deal with hunting; <http://www.klub.okhotnikov.ru/> is a Sakha hunting blog (last viewed 10 September 2021).

⁹ There are many tabooed expressions used before and during hunting. The bear and the wolf, in particular, in Siberia are called in many different ways (see Zelenin 1929), but in Sakha-Yakutia, where the bear’s name is already a tabooed one (*èhè* ‘the grandfather’), this animal is addressed as ‘the old’ (*kyrd’aǵas*), ‘the one from the *tai-ga*’, (*tyataaǵy*), whereas the wolf is called ‘the one with a tail’ (*kuturuktaakh*). It is interesting to note that the same word, *kuturuk*, in Sakha language, with the affix *hut* indicating a profession or occupation (*kuturukhut*), is used to identify the shaman’s helpers (Alekseev 1984).

¹⁰ A typical situation with bears occurs during *bania*, the bathhouse in the open air. *Banias* are simple wooden cabins with three rooms: a steam room, a washing room and an entrance room. The latter has pegs for hanging clothes, benches and tables where



Figure 1 A bear trap in the taiga, Sakha-Yakutia, 2008. Photo by the Author

normally considered to be only gluttonous and do not pose a serious threat. Wolves, instead, are defined as ‘greedy’, ‘bloodthirsty’ as they not only ‘steal’ the same prey from humans, but adopt a wasteful attitude towards their victims. They often slay reindeer but do not eat them on the spot, leaving the carcasses there (apparently) to rot. What really happens is the other way round: they ‘save’ the killed animals for a further visit, when they will eat them up.

Wolves are normally hunted for their furs, which are then sold to companies across the country and abroad. Some of the latter are also leather manufacturers and dealers, such as the biggest and most famous fur shop in Sakha-Yakutia, *Sakha Bult*,¹¹ based in Yakutsk, where it is possible to purchase a wide variety of crafted goods rang-

tea, coffee, water and food are kept. After staying in the steam room, the *bania* goes cool off in a nearby lake or in the washing room, then the *bania* is re-entered and the whole process is repeated again several times. It is not uncommon that, while people are inside the steaming room or are bathing, a bear will sneak into the entrance room to steal food, thus obliging the *bania* goers either to hide or to lock themselves inside, until the animal quietly walks away.

11 The Sakha word *bult* ‘hunt’ comes from the verb *bul* ‘to find’. This is an important lexical element, hinting at the fact that the wildlife living in the *taiga*, equally called *bult*, belongs to the category of the ‘animals to be found’, thus setting them apart from domesticated horses or cattle.

ing from souvenirs to amulets to clothing, among which the winter boots *untý* and, obviously, wolf furs.¹² When a wolf is hunted down, the skin is removed whereas the entrails and the rest of the body are placed on a raised platform (Russian *labaza*, Sakha *aranǰas*), which is put up soon after killing the animal. To a minor extent the entrails are used for specific purposes such as healing remedies or amulets. When I asked the reason of such a way of disposing of the wolf's body, my interlocutors replied at first that their elders did it this way (which is a typical and frustrating answer the anthropologists often receive). After some more focused questions from my side, however, what emerged was that this treatment, which prevents other animals from reaching and eating the carcass, is not reserved to other predators, even medium and big sized, like the wolverine for instance. The only exception is represented by the eagle, which is sacred to the Sakha-Yakut and cannot be killed or eaten. If accidentally an eagle gets shot down, its body is placed on the same platform.

"The wolf is a pest, but we respect it", said the hunter Michail Ivanovitch Andreev: in spite of its role as an opponent, this statement reveals a higher degree of consideration and awe. This also recalls many reported examples of hunting based societies (see Hamayon 1990; Vitebsky 1995; Müller 2011), where hunters re-arranged the skeleton and the remains of the killed animals to let them have a chance in the other world either to join the herds or the flocks of their spirit masters or to come back to this world in order to be killed again in a sort of never-ending reproductive circle. This is well documented by Rane Willerslev when he illustrates the cycle of life and death among the Yukagirs. He states that:

[w]hen one kills an elk or another animal, its *ayibii* (soul) will go to [...] the Land of Shadows where they will regain their shapes and stay until they are reborn in a new house in the Middle World. (2007, 31)

A similar conception is also to be found in Sakha's world structure, which is made of an upper dimension, inhabited by a number of god-

12 In 2019, during the *Yhyakh* annual summer festival, among the stands selling local products like food, drinks, handmade crafts and other goods, a *Sakha Bult* stall was also there, proudly featuring wolf furs and displaying a whole pack of stuffed wolves, but also a throne made of plastic swords and covered by wolf skins, a clear reference to the books and TV series *Game of Thrones* [figs 2-3]. On the other hand, there are a few controversies about *Sakha Bult*: the company appears to have monopolised the fur trade within the territory of Sakha-Yakutia after the collapse of the Soviet Union. Rane Willerslev, in his volume *Soul Hunters*, recalls that he came under the attack of the Sakha fur company for helping the Yukagirs, with whom he was carrying on fieldwork, to sell their furs directly to the European fur-auction houses. He was charged of illegal trade and poaching by Sakha police and he had to flee the village and stay in the forest for quite a long time with Yukagir hunters (Willerslev 2007).



Figure 2 Stuffed wolves displayed at *Sakha Bult* stand, *Yhyakh* summer festival, Sakha-Yakutia, 2019. Photo by the Author



Figure 3 A *Game of Thrones* fashioned cape covered in wolf fur, *Sakha Bult* stand, *Yhyakh* summer festival, Sakha-Yakutia, 2019. Photo by the Author

spirits (the *Ajyy*), and spirit masters (the *itchi*); a middle realm, dwelt by humans and non-humans alike and an underworld, which is abode to different categories of evil creatures: the *abaahy*, the *jör*, but also the dead's souls.

It is commonly held that the Sakha-Yakut have three souls: a mother-soul (Sakha *ijè-kut*), an earth-soul (Sakha *buor-kut*) and an air-soul (Sakha *salgyn-kut*). When an individual dies, the earth-soul turns into dust, the air-soul vanishes whereas the mother-soul, the most relevant one, goes to the Upper World: it transits through the underworld and then is sent to the upper realm, where specific god-spirits related to fertility and regeneration establish when it will return to the Middle World. In the case of animals, the issue of *kut* is still debated: according to pre-revolutionary ethnographer Vaclav Seroshevski (1902), the only animals to own at least one out of the three *kut* are horses, which also represent the main herded animals; wildlife, instead, seems to be devoid of *kut*, or at least of the mother-soul and are consequently excluded from the above-mentioned process of rebirth. Ethnographic sources devoted to the analysis of death practices among the Sakha-Yakut (Alekseev 1984; Bravina 2005; Khudyakov 2002) do not mention the idea of animal regeneration. Nonetheless the wooden platform that harbours the remains of wolves in Sakha language is called *aranžas* and it refers to a particular sort of burial system, consisting in an aerial grave to be built deep in the forest. It is made of a wooden floor fixed between two logs where the carcass is laid several metres over the ground. According to Seroshevskii (1993), this burial method was probably introduced by nomadic peoples like the Evens or the Yukagirs, and its function was linked to the need of leaving the dead bodies behind without abandoning them on the ground, thus preventing scavengers from feeding on them. This system is still practiced up to our days, specifically in case of shamans' deaths, so that the mother-soul can easily fly out of the body. So, there might be connections between the two aspects, but this point needs further investigations. What is certain is that awe, respect and consideration are feelings that are expressed both when speaking about the wolf (the hunters I interviewed never used tabooed words but never called the name 'wolf' either) and when facing it: in a video sent to me by one of my interlocutors, before killing a wolf, the hunter utters these words:

Eeee, great hunter,
I acknowledge that you are strong and intelligent,
but there's too many of you!
So, forgive me and reach your ancestors in the world of rest

This repeated cross-reference to human actions and attitudes (being smart and cunning, greedy, learning from past mistakes, taking ad-

vantage of somebody else) recalls a parallel to human life and above all behaviour. This, however, does not correspond to egomorphism, rather to a higher degree of both detachment and 'becoming other'.

Anthropologists working in non-Euro-American contexts have recently provided sophisticated accounts of people's attempts to curtail relations with non-human animals (Fausto 2007; Kohn 2007). Eduardo Kohn, in his study of transpecies relations in an Amazonian village, depicts a careful balance of engagement and detachment and notes the linguistic and pragmatic firebreaks that the Runa inhabitants of the village establish between themselves and their dogs. He notes that, in a perspectivist universe,

entertaining the viewpoints of other beings is dangerous business. In their attempts to do so, the Runa do not, for example, want to become dogs. That is, transpecies intersubjectivity entails some degree of becoming other, and this carries risks. To mitigate such dangers, the Runa make strategic use of different communicative strategies. (Kohn 2007, 7)

The Runa, in Kohn's account, strive to live in a tension between two equally undesirable extremes: "cosmological autism", in which one loses the ability to be aware of the other selves that inhabit the multinatural cosmos, and "becoming other" (192), which would dissolve Runa distinctive selfhood and position in the cosmos as human beings. In a related argument, Carlos Fausto describes across numerous Amazonian contexts the careful procedures that must be in place to ensure the objectification of prey, thereby minimising the risk of the wrong relationships being fostered (Fausto 2007; Candea 2010). In the case of Sakha-Yakut hunters, on the one hand they need to entertain the wolf's perspective, otherwise they would not have developed such a deep system of know-how and skills when it comes to hunting; there are nonetheless dangers in excessively transformative engagements: they must guard against losing themselves to the point that their identity as hunters suffers a lapse, also abstaining from transforming wolves into friends. The practice of becoming other but 'not too other' is the point of Willerslev's notion of "double perspective". He speaks in fact of a "mimetic double" when referring to Yukaghir hunters and their practices: before and during hunt, they 'become' the prey, pretending to be the victim, in a sort of mimicry which, instead, is just apparent. This mimesis in fact aims at attracting prey and catching it. What is relevant about this 'mimetic double' is that the double is never identical to its original form, but it is an imperfect copy: this feature enables the hunter to be aware and confident that he is not an animal, or, as Willeslev would put it, "not animal, not-not animal" (2004, 269).

4 Conclusions

When I was in the field, a common matter of discussion, not only with hunters, revolved around a controversial film from 2010. That year, a film called *Loups* (wolves), by director Nicholas Vanier, had been shot right in the Oymyakon region. I did not know about this film before and I first heard of it when I was there, as almost everyone mentioned it to me. They said that it took the team almost two years to shoot it and, after such an effort, the film premiered right in Oymyakon. The plan was to distribute it throughout Siberia and maybe to Europe, however it did not go as expected and the audience reacted to it so badly that the film was withdrawn from cinemas; only a web version is now available. The reasons why my interlocutors and, more broadly, the people I spoke to disliked it so much were many, starting with the choice of non-human ‘actors’: the wolves starring in the film came from Canada and were very different in size, in the paw shape, colour of the fur from ‘native’ ones. The main human actors were all French, albeit with Asian appearance but not with the features of the people living in this area who were used mostly as extras in background scenes. Some points of the script had actors say and do very improbable things on how to herd and behave with reindeer. Nonetheless, to my interlocutors’ eyes, all these mistakes were still forgivable. What was not forgivable at all was the script itself, which deals with a reindeer herder and a pack of wolves becoming friends. To their eyes, there cannot and there will not ever be a friendship between humans and wolves, this is completely out of reality, out of the state of things and not attainable at all. “You can tame a wolf or a wolf cub, but sooner or later the wolf will reveal its nature”, said Andrei Nikolaevich Vinokurov, a hunter and forest ranger. Its nature, whatever nature means, is what makes the wolf an opponent. An ideal opponent.

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Indigenous Shamanic Worldviews as Dialogical Eco-Cosmology

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Abstract This article deals with indigenous shamanic worldviews and indigenous knowledge as dialogical eco-cosmology. It shows the relevance of eco-cosmology as local indigenous ecological and spiritual knowledge in the context of global biodiversity and sustainability discourses.

Keywords Eco-cosmology. Indigenous knowledge system. Indigenous worldview. Dream as knowledge. Adivasi and Brazilian indigenous people.

Summary 1 Introduction. – 2 Eco-Cosmology – An Indigenous Alternative to SDGs and Shamanic Perspective. – 3 Eco-cosmologies as Shamanic Worldviews and Dialogic Healing. – 4 Shamanic Dreams. – 5 The Amazonas. – 6 Anthropogenic Forests of the Amazonas. – 7 Amerindian Ontologies. – 7.1 The Yanomami. – 7.2 Brazilian indigenous Amazonia. – 8 Davi Kopenawa – Yanomami Spokesman and the Dalai Lama of the Rainforest.



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1 Introduction

Eco-cosmologies are indigenous worldviews, knowledge systems and life-worlds relating the human intrinsically with the non-human, the cosmos and the other-than-human sphere such as the earth, trees, animals, rivers, mountains. Eco-cosmologies are indigenous knowledge systems correlating agro-ecology, ethno-forestry, sustainable food production, biodiversity and sustainable living. With the ecological destruction of ecosystems most valuable local knowledge resources and eco-cosmological worldviews disappear worldwide, and have to adopt to dramatic landscape changes. These worldviews and local knowledge systems transmitted through shamanic dreams and dialogical ecological ritual practices, however, could be a key for finding local and global solutions for a sustainable and philanthropic global world of cultural and eco-biological diversity, mutuality and dialogue.

2 Eco-Cosmology – An Indigenous Alternative to SDGs and Shamanic Perspective

Eco-cosmologies as indigenous knowledge systems on sustainability represent an indigenous alternative to the United Nations global Sustainable Development Goals (SDGs), an oxymoron and compromise established between environmentalism and the capitalistic business model of a developmental progression. Eco-cosmologies can be viewed as indigenous sustainability knowledge systems, however missing in the global SDGs.

The reason for the global exclusion of indigenous peoples perspectives on sustainability might be the general industrial world's negligence of indigenous spiritual traditions as knowledge matrices.

Eco-cosmologies represent shamanic systems which play a major role in the transmission of indigenous knowledge (Silitoe 1998), incorporating sophisticated ethno-botanical and ethno-medicinal taxonomies. As a shamanic apprentice, the young shaman learns about plant classifications, symptoms of diseases, cosmological connections, deductions and other logical devices important when he communicates with laymen in a more profane context (see Lévi-Strauss 1962, Agrawal 1995). Contemporary indigenous ecological knowledge systems relate to indigenous shamanic world-views (Århem 1996, 166-84; Kopenawa, Albert 2013) and the non-dualistic perspective on human and non-human agencies in a mutually shared world and cosmos (see also Reichel-Dolmatoff 1976, 307-31).

Ontological pluralities include the diverse perspectives of humans, non-humans and other-than-human elements regarding each other, interconnecting with each other as different personalities in a mutually interconnected world and cosmos (see Viveiro de Castro 2015).

With the ontological turn in French anthropology (Descola 1992; 2005; 2013; Viveiro de Castro 1998; 2015) as well as the discourse on neo-animism (Harvey 2005), hegemonic anthropocentric and dualistic perspectives have been broadly questioned. An emerging “new kind of ecological anthropology” (Descola, Pálsson 1996, 2) has been since then blurring the supposed clear demarcation line between nature and culture opening up new approaches to understanding alternative indigenous taxonomies, epistemologies, hermeneutics and ecologies.

Shamanism as a common term pre-eminently designates a religious phenomenon of Siberia and Inner Asia, with the term shaman originating from the Siberian Tunguz *šaman* and relating to a religious trance specialist of the indigenous Evenki people in eastern Russian Siberia. Throughout the immense area comprising the central and northern regions of Asia, the religious/ritual life of Siberian societies centres around the ritual specialist – the shaman – who

remains the dominating figure, for throughout the vast area of Asia in which the ecstatic experience is considered the religious experience par excellence, the shaman, and he alone, is the great master of ecstasy. A first definition of the complex phenomenon of shamanism – and perhaps the least hazardous – is that it is a technique of ecstasy. (Eliade 2005, 269)

Despite its ‘ism’, shamanism should not be regarded as an institutionalised religion, rather it is a complex of different rites and beliefs surrounding the activities of the ritual specialist – the shaman. Piers Vitebsky speaks of “shamanism” as a common shamanic spiritual worldview (2001) and defines “the shaman” (1995) as a spiritual trance healer mediating between the world of the living and the world of the spirits, a common phenomenon occurring from indigenous Siberia to the Amazon.

Today shamanism is regarded as a variety of similar phenomena in indigenous North American, South American and South Asian cultures. Contemporary shamanisms are in this vein embedded in analogous ecological knowledge systems relating always to indigenous cosmologies, ontologies (Kopenawa, Albert 2013) and indigenous hermeneutics (see Gomez 2021)

In am using the term ‘shamanism’ in Atkinson’s sense as a comparative concept. In her article, Atkinson (1992, 307-30) discusses various themes raised by the scholarly constructed models of shamanism. Well aware of the critiques of this Western category, she nevertheless postulates maintaining the concept in a plural form: ‘shamanisms’. In this way the cultural, historical and social specificity of local practices can be ensured (Atkinson 1992, 321) and the continuity of the interdisciplinary dialogue guaranteed – regardless of ethnographic specificities.

In this vein, indigenous shamanisms include classical shamanic cultures of Siberia and Inner Asia, of South Asia, North and South America. Also prehistorical forms of shamanic cultures can be found in Rock Art and archeological settings. Urban contemporary shamanisms emerge also as Neo-Shamanisms in diverse current cultural urban setting of the global world.

3 Eco-cosmologies as Shamanic Worldviews and Dialogic Healing

Following Vitebsky's classification (2001), shamanism, contrary to its 'ism' - can be regarded as a universal spiritual phenomenon which does not indicate any sort of unified doctrine or canonization of content. Instead, the ritual practices of ecstasy, the centrality of ritual specialists and healing and linguistic practices (see also Walker 2001, 35-60) build the starting points of this analytical classification of shamanism.

Shamanism is not a single, unified religion, but a cross-cultural form of religious sensibility and practice [...]. Shamanism is scattered and fragmented and should not be called an 'ism' at all. There is no doctrine, no world shamanic church, no holy book as a point of reference, no priest with the authority to tell us what is and what is wrong. (Vitebsky 2001,11).

However, as Vitebsky notices, there are astonishing cultural similarities in shamanic societies such as recurring motifs of 1) an initiation of the ritual specialists, the shamans; 2) the travelling between worlds; 3) the existence of benevolent and malevolent non-human beings, such as spirits.

Recalling Sudhir Kakar, who calls a 'shaman' a "specialist in a non-Western culture who relieves and heals anxiety" (Kakar 1982, 92), indigenous shamanisms are traditions of dialogic healing. In the same vein as Lévi-Strauss (1974, 213-34), Kakar classifies the local indigenous Indian ritual specialists employing a symbolic language in order to heal (Kakar 1982, 94), as shamans. The healing here consists of dialogues between the non-human and the human, the spirits of the forests, rivers, mountains, the cosmos and the earth. Kakar's descriptions of the therapeutic and ritual specialists of the Indian indigenous Oraon (Kakar 1982, 95-111) correspond very much with my own ethnographic observations of indigenous *alekh gurumais*, local shamans in Koraput, Odisha (Guzy 2002; 2007; 2020) who act as spiritual and ecological mediators and dialogical healers.

Ecology within an indigenous shamanic knowledge system and worldview is thus spiritual. It is a culture and language of spirits, an-

imated energies and other than human agents with their own motivations, perspectives and agencies which the shaman on his/her spiritual, astral trance journeys has to decode and to mediate. Shamanic trance eco-dialogues with an imbalanced and conflictual non-human 'nature', which need to be understood as the particular culture of spirits, deserves an eco-dialogical mediation, shamanic translation, reconciliation and healing.

This dialogic nature of indigenous eco-cosmologies is strongly echoed in Piers Vitebsky's *Dialogues with the Dead: The Discussion of Mortality among the Sora of Eastern India* (1993), where the indigenous Sora shamanism is shaped by the concept of a dialogic continuity between humans and the spirits of the deceased. Among the indigenous Sora, their ideas of death and the afterlife, and the concept of the individual and of personality are based on spiritual dialogues. The book is organised around indigenous dialogues between the living and the dead. For the dialogue with the dead, the Sora need mediators (*kuran*) between the worlds of the dead and the living, whom Vitebsky translates as 'shaman' (Vitebsky 1993, 18). These shamans, mostly women, but also men, put themselves into a dissociated state of consciousness - trance - in order to become receptive to the possession by a dead person's spirit. The dead person's spirit then speaks through the female or male shaman (1993, 5). The living people present at the ritual gathering, e.g., embrace the dead person (embodied by the shaman), argue intensely with him or her, cry, laugh, hit or caress the embodied deceased. The shaman, embodying the deceased during the ritual, is confronted with extremes of emotions. For Vitebsky, such emotional dialogues represent not only expressions of communication with the afterworld, but also the feelings of the collective. Among the Sora there are two types of shamans: the funeral shamans (usually women), who take over more important ritual roles, and female or male divinatory shamans who heal through sacred oracles or auguries (divination). Male and female shamans of the Sora undertake spiritual 'journeys' that a 'normal' person only experiences once - namely with the exit of the soul of the body at the time of the physical death. The shaman, however, goes to the underworld and begins dialogues with the dead in order to comfort and heal the living. His or her quality and qualification as a shaman, as a spiritual mediator and communicator, is the fact that he or she returns from the astral journey to the world of the spirits, in order to transmit the message of the dead for the living.

The shaman of the Sora heals with dialogues and with verbal communication, mediating in this way between the dead and the living. The shamanic worldview can be defined as explicitly dialogical, mediative and healing.

4 Shamanic Dreams

Shamanic dreams are a crucial characteristics of shamanic worldviews and life worlds.

The trance state as the altered state of consciousness of the shaman or the dream is crucial in understanding indigenous hermeneutics:

While in a state of trance, the shaman is regarded as capable of direct communication with representatives of the otherworld, either by journeying to the supranormal world or by calling the spirits to the séance. He is thus able to help his fellow men in crises believed to be caused by the spirits and to act as a concrete mediator between this world and the otherworld in accompanying a soul to the otherworld, or fetching it from the domain of the spirits. The shaman acts as a healer and as a patron of hunting and fertility, but also as a diviner, the guardian of livelihood. (Siikala 2005, 8280)

Shamanic dreams are not exclusively apparent in non-European indigenous contexts. They have not disappeared from European cultures. Dreams that transmit both personally or communally transformative knowledge from other realms continue to manifest within the Balkan's Christian and Islamic cultures. In the Balkans and Eastern Europe careers of healers are commonly initiated through shamanic dreams (see Kapalo 2014).

The importance of dreaming, visions and ecstatic capacities of shamans are apparent in all cultures of orality expressed in songs, performances and dances. Shamanic dreams and visions express through therianthropy, the shape-shifting between humans, non-human beings and agencies (Beggiora 2013, 259-74), "the knowledge that comes through dreaming is absolute because it comes from a level of symbolic association that is deeper than consciousness" (Ridington 1971, 123). This knowledge is acquired by the lonesome experience with the 'bush', the 'jungle' where encounters with animals transmit transformative knowledge between humans and non-humans such as medicine mythic animals or other than empirical beings. The North American Beaver Indians for example consider animals as educators and as symbols for the varieties of human nature as

a man can learn his combination of qualities through getting close to the qualities of animals. The experience with a medicine animal in the bush is the culmination of childhood and the beginning of adulthood. (Ridington 1971, 122)

The same applies for example for the Siberian Nenets who as indigenous reindeer herders send their children "to learn from the rein-

deer". The reindeer for the Nenets is a mythic and central animal that transmits spirituality to the child. This spirituality is regarded as a particular knowledge of life based on human animal communication and understanding (Toulouze 2017).

In shamanic worldviews and life worlds (Guzy, Kapalo 2017, 3-5) the transformative experiences of animal human and ecological encounters through therianthropic visions and dreams are the most important expressions of shamanic imaginaries (Noll et al. 1985), realities, epistemologies and ontologies revealing imagined, dreamt and lived experiences of local shamanic societies. In this way, the visual mental imagery experiences construe the inner and outer knowledge of life worlds and worldviews.

5 The Amazonas

The Amazon rainforest (Amazonia) represents one of the world's greatest natural resources where about 20% of Earth's oxygen is produced as thus is labelled as the 'Lungs of our Planet'. The Amazon rainforest also contains the world's highest level of biodiversity with half of the world's species: with over 500 mammals, 175 lizards; over 300 other reptiles species, about 30 million insect types and one third of the world's birds population.¹ The Amazon River gives the Amazonas the life streams of the rainforest with the Amazon delta covering 2,722,000 million square miles, and extending to Brazil, Columbia, Peru, Venezuela, Ecuador, Bolivia, and the three Guyanas. Amazonia covers more than half of Brazil.

6 Anthropogenic Forests of the Amazonas

Since the publication of the *Handbook of South American Indians* by Julian Steward in 1946 and the beginnings of research on Cultural Ecology (see Sutton, Anderson 2004), it is known that a large part of the Amazonas' bio-diversity is the result of the skilful agricultural, ecological and botanical knowledge of Amerindian indigenous communities. This leads to the scientific recognition of the dramatic ethno-ecological impact of Amazonian indigenous hunter-gatherers societies for the development of the unique ecological diversity of the Amazonas since millennia (Rival 1999, 77-85).

Botanical and ethno-botanical research by Balée and Posey (Balee 1993; Posey 1984; Posey, Balee 1989) have empirically proven that indigenous people of Amazonia have created 'anthropogenic forests'

¹ <https://rainforests.mongabay.com/amazon/>.

by means of a complex knowledge of 'agroforestry' since prehistoric times to this day. Also Rival's research on historical ecologies in the Amazonas among the Huaruani of Ecuador proves the socio-cultural and ecological existence of 'anthropogenic' forests as resources that are not 'wild' but 'bio-cultural', ethno-historical and manmade according to elaborated ethno-agricultural, ethno-biological knowledge of Amerindian hunter gatherer societies and their local ancestral histories (Rival 2002; 2006).

The Huaorani are very conscious of past human activity, and are perfectly aware of the fact that every aspect of their forested territory has been transformed in equal measure by their ancestors, other indigenous groups, and the forces of nature and the supernatural. Taking the forest to be a legacy from the past, they have developed an understanding of the forest as owing its existence to past human activities. The forest exists to the extent that humans in the past lived and worked in it, and by so doing produced it as it is today for the benefit and use of the living. Their relation with the forest is lived as a social relation with themselves across generations, hence its eminently historical character. (Rival 2006, 82)

Walking in the forest means thus for the Huarani an constant ecological encounter with their ancestors, their beloved deceased family members and their local history, memory, the social and individual healing.

In the same vein research by Josep A. Garí on indigenous agro-ecology refutes the global perception of 'wild Amazonia' and proves the sustainable indigenous impact on Amazonian ecosystems and biodiversity.

Indigenous communities conserve, use, cultivate, manage and exchange biodiversity as a fundamental component of their rural lifestyle. The indigenous agro-ecology comprises the whole set of knowledge systems, agro-ecological practices and socio-cultural dynamics that shape indigenous agriculture in the context of biodiversity. The indigenous agroecology provides food security, health care, and ecosystem resilience through a local regime of biodiversity conservation and use. (Garí 2001, 21)

Deep historical ecological, agro-ecological, ethno-biological and ethno-veterinary knowledge (Monteiro et al. 2011) of Amerindian indigenous populations have created and sustained anthropogenic Amazonia forests and human survival.

7 Amerindian Ontologies

Amerindian ontologies of the Amazonas represent best the relatedness between the human and nonhuman sphere – where the dreams of the shaman connect an animated ecological landscape with the Amerindian indigenous people, which I call an eco-cosmological worldview (see also Sarma 2011).

The shaman in Amerindian ontologies heals through ecstatic dream transformations and mediations of knowledge encountered through journeys to other realms of the world (Kracke 2006, 106-20).

7.1 The Yanomami

The Yanomami are a good example for the possible impact of Amerindian indigenous people on contemporary discussions around climate change and eco-biological sustainability.

The Yanomami represent the largest relatively isolated indigenous community in South America. They live in the rainforests and mountains of northern Brazil and southern Venezuela. Like most indigenous groups on the continent, the Yanomami probably migrated across the Bering Straits between Asia and America some 15,000 years ago, making their way slowly down to South America. Today their total population stands at around 32,000. At over 9.6 million hectares, the Yanomami territory in Brazil is twice the size of Switzerland. In Venezuela, the Yanomami live in the 8.2 million hectare Alto Orinoco – Casiquiare Biosphere Reserve. Together, these areas form the largest forested indigenous territory in the world.

7.2 Brazilian indigenous Amazonia

The 2010 IBGE (Instituto Brasileiro de Geografia e Estatística) Census calculates the total indigenous population in Brazil to 896.917 individuals, which corresponds to approximately 0,47% of the country's total population (200.4 million). The Brazilian Amazon is home to 280,000 to 350,000 indigenous people, of which 180,000 live traditionally, heavily dependent on the ancient forest for their sustenance, spiritual and cultural life. The 2010 IBGE Census counts 197 forest-dwelling indigenous groups, living either on reservations or in one of four national parks.

Since the beginning of the European colonisation of the Americas beginning in 1492 with Columbus, Europeans collectively killed between 70 million to 100 million indigenous people (within 80 years). In the analysis of genocide expert David Stannard, this constitutes “the largest ongoing holocaust in the history of humanity” with 95%

of indigenous people killed by European actions, 100% of indigenous lands stolen by Europeans, and with European-descent people becoming the most prosperous people on the planet (see Stannard 1992, X-XI). According to the anthropologist Darcy Riberio (1962, 325-46), 55 indigenous populations vanished in the first half of the twentieth century alone.

In 2010, 247 peoples, speaking more than 150 different languages were documented (IBGE 2010). As a whole, the Indian population has been growing over the last 28 years, although some specific peoples have decreased in number and some others are even threatened with disappearance. Among the Indian peoples in Brazil listed by the Instituto Socioambiental (ISA), seven have populations between 5 and 40 individuals. According to Eduardo Viveiros de Castro, researcher and professor of anthropology at the Museu Nacional (UFRJ) and founding partner of Instituto Socioambiental (ISA), an Indian

is any member of an indigenous community, recognized by the latter as such. An indigenous community is any community founded on kinship or co-residence relations between its members, who maintain historical-cultural ties with pre-Colombian indigenous social organizations.²

According to the Constitution, indigenous people in Brazil are considered 'relatively capable' Brazilian citizens, having a childlike status which deserves particular protection from the state. In this sense, according to Instituto Socioambiental, the state follows a principle established by the old Brazilian civil code of 1916, based on the idea that Indians should be tutored by a state indigenous institution. From 1910 to 1967 it was the Serviço de Proteção ao Índio/SPI and currently it is Fundação Nacional do Índio (Funai). The aim has always been to support a full integration of indigenous communities into the national community, which means to integrate them into the majoritarian Brazilian society. The Indian Statute of the Brazilian Constitution and the rights of Brazilian Indigenous Peoples were promulgated in 1973, defining the rules on the relations of the state and Brazilian society with the indigenous communities. Even though the 1973 Statute remains in force, new approaches in the Federal Constitution of 1998, grant greater rights to indigenous peoples. The 1988 Constitution does not call for the integration of the indigenous peoples into Brazilian society anymore, ensuring them, the right to be different from the rest of the country.³

² <https://pib.socioambiental.org/en/c/no-brasil-atual/quem-sao/quem-e-indio>.

³ <https://pib.socioambiental.org/en/c/direitos/estatuto-do-Indio/introducao>.

Amnesty International, Cultural Survival and Survival International have for many years raised the problem of the lack of inclusion of indigenous peoples' voices into mainstream discourses in Brazilian educational, cultural and political life. A critical discourse on unsustainable progress and the impact of destructive development by Brazil's contemporary majoritarian society in relation to Brazil's indigenous people is lacking.

The relative isolation of Brazilian indigenous people seems to have retained pre-Columbian eco-cosmological and agro-ecological knowledge systems over centuries which could be crucial for sustainability projects in times of ecological calamities and global climate change challenges in other parts of the world.

8 Davi Kopenawa – Yanomami Spokesman and the Dalai Lama of the Rainforest

Davi Kopenawa is the contemporary Brazilian prolific Yanomami shaman and intellectual, a contemporary global indigenous leader and environmental activist supported by Survival International.⁴

Davi Kopenawa's shamanic dreams and visions on the future of the world are expressed in his testimonial auto-ethnography *The Falling Sky Words of a Yanomami Shaman* (Kopenawa, Albert 2013). This auto-biography could be an inspiration for imagining a non-dualistic world and cosmos, where the eco-cosmological visions of the shaman hold the world by changing the worldview. In the Yanomami worldview the shamans hold the sky by means of shamanic ecstatic rituals, and by doing so he or she heals the imbalances and disturbances between the human and the non-human world. The shamanic 'holding of the sky' relates to shamanic eco-dialogical rituals as spiritual dialogues, mediations and encounters with the cultures of malevolent spirits who need healing through a deep ritual and spiritual communication.

When they think their land is getting spoiled, the white people speak of 'pollution'. In our language, when sickness spreads relentlessly through the forest, we say that xawara [epidemic fumes] have seized it and that it becomes ghost.

What the white people call the whole world is being tainted because of the factories that make all their merchandise, their machines, and their motors. Though the sky and the earth are vast, their fumes eventually spread in every direction, and all are affected: humans, game, and the forest. It is true. Even the trees are

⁴ <http://www.survivalinternational.org/films/yanomamiland>.

sick from it. Having become ghost, they lose their leaves, they dry up and break all by themselves. The fish also die from it in the rivers' soiled waters. The white people will make the earth and the sky sick with the smoke from their minerals, oil, bombs, and atomic things. Then the winds and the storms will enter into a ghost state. (Kopenawa, Albert 2013, 295)

As a spiritual shamanic indigenous radical critique of modernity and an indigenous apocalyptic vision, the Falling Sky can be read as a fundamental dismissal of global anthropocentrism, modernity and materialism. This modernity and materialism resulting in the geological and ecological concept of anthropocene "a world being substantially reconfigured by human activity" (Hamilton 2014, 1), is facing today unprecedented humanly orchestrated ecological, social and cultural disasters.

A new knowledge based on indigenous critique of modernity and its apotheosis of anthropocene might potentially have the power to create a new imagination of a radically interconnected and spiritual world, a worldview which anthropocene - despite its incredibly digital and global capacities - has yet not succeeded to create.

But will an interconnected world-view arise fast enough and gain sufficient political, economic, and social traction soon enough to set humanity on a new course? (Hamilton 2014, 7)

I am convinced that we can learn from the indigenous critique and worldview: only if we start learning to imagine a different reality, to dream and to eco-dialogue we will start to transform and to heal us and the world. Indigenous shamanic worldviews and their dialogic eco-cosmologies reveal a path for academic, spiritual and ecological discoveries and learning.

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From the Birth of the Soundscape Concept to the Sound Ambient in Disneyland-Paris

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Abstract Giovanni De Zorzi traces the historical and aesthetical background of 'soundscape', from the sound/noise opposition in physics to the reconsideration of 'noise' by the avant-gardes of the twentieth century arriving to the conceptions of Murray Schafer and Steven Feld, which gave birth to many nowadays disciplines. After this, Alessio Calandra deals with the possible influence of the soundscape of Disneyland Park, an amusement park in Disneyland Paris: he begins from some 'physical' places of the Park, such as *Main Street U.S.A.*, *Frontierland*, *Adventureland*, and arrives to the detailed analysis of their specific soundscape related to the sale of Disney-branded gadgets and products within the park.

Keywords Soundscape. Acoustemology. Anthropophony. Sound installation. Disneyland Park.

Summary 1 About *Disneyland Paris*. – 1.1 *Main Street, U.S.A.* – 1.2 *Frontierland*. – 1.3 *Adventureland*. – 1.4 *Fantasyland*. – 1.5 *Discoveryland*. – 2 Analysis of the Lands. – 2.1 *Main Street, U.S.A.*'s Soundscape. – 3 The Relationship Between Architecture and Soundscape. – 4 From the Central Plaza to *Discoveryland*. – 5 *Discoveryland*'s Soundscape. – 6 The Music in the *Sleeping Beauty Castle*. – 7 *Fantasyland*'s Soundscape. – 8 Concluding Remarks.



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This paper is a four-hand *sonata*: after a brief introduction by Giovanni De Zorzi who takes into exam the historical and aesthetical background of ‘soundscape’, Alessio Calandra will deal with the possible influence of the soundscape of Disneyland Park, an amusement park in Disneyland Paris, related to the sale of Disney-branded gadgets and products within the park.

I will begin with a fundamental theme in music and musicology as is the opposition sound/noise. According to the Physics definition, a regular wave produces a sound while an irregular wave produces a noise, an undetermined sound that cannot be analysed according to the usual parameters of frequency, pitch and timbre. Maybe the echo of this concept unconsciously reappears in nowadays colloquial expressions, which puzzles me, such as ‘the noise’ of sea or ‘the noise’ of rain.

Of course, the acoustic physics definition cannot resolve a question that is deeply intertwined with the aesthetic canons of a given culture and with the tastes of a single listener: in the same musical culture, for instance the Euro-American one, the sound of a violin can be a torture for a listener who perceives it as screechy, while a *thrash metal / noise punk* tune can be delightful for the fan and, vice versa, a torture for a listener who does not appreciate this genre. The issue becomes more acute when we deal with music from a culture that is geographically and culturally ‘distant’: early accounts of Western travellers hearing the music of other cultures abound in terms such as ‘noise’ and ‘cacophony’.

During 20th century, western art music arrived, with its avant-gardes, to a redefinition of the concept of ‘music’ that overcame the crucial opposition sound/noise: the first case was, as far as I know, the *intonarumori* (literally, ‘noises tuning’) machines invented by futurist musician and composer Luigi Russolo (1885-1947): each instrument consisted of a wooden parallelepiped with a cardboard or metal speaker at the front, the player pressed buttons and operated levers to set the machinery in motion and control its dynamics. Inside the *intonarumori* consisted of metal wheels, gears and metal strings that were put in movement by the rotation of a manual handle operated by the ‘musician’, who could control and modify the pitch of the notes operating a lever placed in the upper part of the instrument, varying the length of the strings. According to the noise produced, the instruments were classified into families (crackers, gurglers, rumblers, buzzers, bursters, hissers, crumplers and howlers)¹ but it seems worthy of note that each of these families were then sub-

¹ In Italian: crepitatori, gorgogliatori, rombatori, ronzatori, scoppiatori, sibilatori, stropicciatori and ululatori.

divided in various registers as soprano, alto, tenor and bass, respecting, in a sense, the canonical differentiation in vocal registers that we find throughout the whole history of Euro-American Art Music.

The first public performance of an *intonarumori* took place on June 2nd 1913 at the Teatro Storchi in Modena where Russolo, with its young Futurists colleagues, played a *scoppiatore* (bursting). The performance was a *succès de scandale* that, retrospectively, was a real innovative and groundbreaking episode in the European artistic avant-gardes. This was followed by concerts for *intonarumori* that Russolo gave in Milan, Genoa and London, at the Coliseum Theatre, in 1914. After the First World War, Russolo presented three concerts for *intonarumori* in Paris (1921) and then he composed an *accompagnamento intermittente* (intermittent accompaniment) for *intonarumori* in the Futurist Opera *Il tamburo di fuoco* (The Fire Drum) by Filippo Tommaso Marinetti (1876-1944), published in Milan by Sonzogno in 1922, over the more 'canonical' musical interludes (*intermezzi musicali*) scattered throughout the opera and composed by Futurist composer Francesco Balilla Pratella (1880-1955).

The *intonarumori* can be considered as the beginning of an history of attempts to overcome the old aesthetical sound-noise opposition; in this history stand out the experiments with music tapes made, between 1950s and 1960s, by Bruno Maderna (1920-1973), Luciano Berio (1925-2003), Luigi Nono (1924-1990), Karlheinz Stockhausen (1928-2007); similar experiments were made by George Martin (1926-2016) at the Abbey Road Studios for *The Beatles* records, beginning with "Tomorrow Never Knows" from the album *Revolver* (1966) onwards.

The use of machines takes us to the 'Generative Music' invented by Brian Eno (b. 1948), an ever-changing and self generating music created by a mechanical system; such a system gradually evolved, with technology, from his album *Discreet Music* (1975) until nowadays. Finally, we should consider the synthesisers and the DJ turntables as 'machines', so present in nowadays soundscapes: all these machines are 'in debt' with the *intonarumori* and its inventor Luigi Russolo.

Four years after the Futurist *soirée* at the Teatro Torchi in Modena, we note the ticking of typewriters, the bang of a revolver and the car horns in *Parade* (1917) by Erik Satie (1866-1925), with libretto by Jean Cocteau (1889-1963) and scenes by Pablo Picasso (1881-1973). A decade later, Edgar Varèse (1883-1965), in his *Amériques* (1926-1929), composed a vivid representation of New York City soundscape (but the term did not yet exist...) incorporating its howling police car sirens in the score. It seems curious that 'noises' were introduced here as sonic and iconic signs of a new cityscape and a new society. Be that as it may, the sirens returned in its successive *Ionisation* (1931), which is built on percussions, indefinite or relatively definite in musical pitch, on sirens and, interestingly, on an instrument called 'lion's roar' because the indefinite sound/noise that it produces resem-

bles to a 'roar': such an instrument is defined by ethnomusicologists as a 'friction drum' because it has a drum head and a cord or horse-hair passing through, producing an articulate and yet indefinite and powerful sound/noise.

This instrument leads us to the many non-Western music instruments reflecting a non-Western aesthetic that do not care about categories of Sound and Noise, as is the ancient *Bull Roarer* (or *Rhombus* or *Turndun*) that we find among the Aborigines of Australia as well as in many other cultures of the planet, which is at the same time a ritual musical instrument, the voice of the spirits, and a device used for communicating over great distances.

In western music avant-gardes history the masterwork *4'33"* composed in 1952 by the genial John Cage (1912-1992) stands out as a turning point: the performer sits down at the piano, opens the piano lid, opens the scores and observes four minutes and thirty-three seconds of... silence in three movements (!). The work is a multi-faceted masterwork that, at the same time, is an ironical provocation in the Dadaist *esprit*; one of the first examples of 'performance-art' and a Buddhist *zen* meditation on emptiness. Besides all interpretations, the composition focuses on silence, a silence that does not exist in nature so that gradually in the concert-hall emerges a *soundscape* composed by the sounds of the audience (a listener yawning, coughing, rattling in his/her bag) and by the same environment of the performance (a car passing in the distance, a leaf falling from its tree, a cat meowing, a man calling someone in the street etc.).

4'33" subtly influenced the same Soundscape concept, which can be defined as the acoustic environment perceived by humans, in context. The term was originally coined in 1969 by Michael Southworth in his article "The Sonic Environment of Cities" devoted, again as above, to the urban soundscape. The term was then used and 'popularised' in many articles and books by the late Canadian composer Raymond Murray Schafer (1933-14 August 2021) who recently left us and to whom I dedicate these lines.

More than fifty years after its coining, the meaning of the term 'soundscape' depends nowadays on the discipline, spanning from urban design to ecology: in the particular perspective of this article, it is important to separate soundscape from the acoustic environment. The first can be defined as a sound, or a combination of sounds, that forms or arises *from* an immersive environment, while the second can be defined as the combination of all the acoustic resources, natural and artificial (a decisive point for the next pages), within a given area as *modified* by the environment.

Following this distinction, we have new disciplines as acoustic ecology (or even soundscape ecology) in which the term soundscape refers to:

1. natural acoustic environment, consisting of sounds from Nature (animals, trees, plants etc.). More specifically, the term 'biophony' designate the collective habitat expression, while the term 'geophony' is applied for the sounds of weather and other natural elements;
2. environmental sounds created by humans, defined also as 'anthropophony' as are controlled sound, music compositions, sound design or sounds of mechanical origin, all resulting from the use of industrial technology.

Nowadays (2021) under the umbrella term 'soundscape' we find a mixed set of definitions referring to scientific disciplines and performing arts such as acoustemology, ambient music, antropophony, biomusic, ecoacoustic, geophony, musique concrète, noise map, program music, sound art, sound installation(s), sound map, sound sculpture, soundscape ecology, space music, underwater acoustics.

All these disciplines were and are more or less influenced by the scientific researches made by Steven Feld (b. 1949), an American musician, ethnomusicologist, anthropologist and linguist who worked for many years with the Kaluli (Bosavi) people of Papua New Guinea. The first fruit of this research on the field was his monograph *Sound and Sentiment: Birds, Weeping, Poetics, and Song in Kaluli expression* (University of Pennsylvania Press, [1982] 1990). Together with the many books that followed *Sound and Sentiment*, we should remember his many carefully recorded works: *Music of the Kaluli* (Institute of Papua New Guinea Studies, 1981); *The Kaluli of Papua Nugini: Weeping and Song* (Bärenreiter Musicaphon, 1985); *Voices of the Rainforest* (Rykodisc 1991); *Rainforest Soundwalks: Ambiences of Bosavi, Papua New Guinea* (Earth Ear, 2001); *Bosavi: Rainforest Music from Papua New Guinea* (Smithsonian Folkways, 2001); *Bells and Winter Festivals of Greek Macedonia* (Smithsonian Folkways, 2002); *The Time of Bells*, vols 1-2, 2004; vol. 3 (with Nii Noi Nortey, 2005); vol. 4 (2006).

Concluding this short introduction, let me remember some days passed in Venice with Steven Feld recording the soundscape of the city: his deep immersion in the sounds that surrounded us showed me a real deep meditation state while listening, and made me discover a new dimension in which we often move too absent-mindedly and carelessly. With my gratitude for Steven Feld's teaching, I leave the floor to Alessio Calandra and to his experience in *Disneyland Paris*.

Giovanni De Zorzi

1 About Disneyland Paris

Disneyland Paris is an ensemble of two amusement parks, *Parc Disneyland* and *Parc Walt Disney Studios*, situated in an area 32 km east of Paris. It originally opened to the public under the name of “EURO Disney” on April 12, 1992, though the name was subsequently changed to the current one. The most iconic feature of *Disneyland*, which also serves as its symbol, is a castle based on the animated picture *Sleeping Beauty*. The *Sleeping Beauty Castle* is clearly visible only after entering from the main gates of the park, which are situated under a hotel that hides the gorgeous building to the outside world. The Castle is situated in the centre of the park, in an area called Central Plaza, and is visible from all the surrounding areas: *Main Street, U.S.A.*, *Frontierland*, *Adventureland*, *Fantasyland* and *Discoveryland*.

1.1 Main Street, U.S.A.

After entering the park, visitors walk across the first thematic area, which is dedicated to shopping, with stores, bar, stands and restaurants. The *Main Street* was inspired by Walt Disney’s hometown and is supposed to recreate the main street of a stereotypical city in the U.S. during the beginning of the 1900s. When presenting it to the public, Walt Disney said:

For those of us who remember the carefree time it recreates, Main Street will bring back happy memories. For younger visitors, it is an adventure in turning back the calendar to the days of their grandfather’s youth. (Sussman, Hollander 2015, 51)

In order to effectively recreate the historical period, characterized by the introduction of electricity among other innovations, there are both electric and gas lighting systems in the *Main Street*. The former is placed along the building roofs and the shops’ walls, while the latter lights the street that leads from the park gates to the *Central Plaza*.

1.2 Frontierland

A path across a wooden structure – called *Fort Comstock* – leads the visitors from the *Central Plaza* to *Frontierland*. This area is based on the cinematographic representation of the Far West. In the centre of *Frontierland* there is a huge artificial lake with an island made of red cement hills, which host one of the most spectacular roller coasters ever built in Europe.

1.3 *Adventureland*

Adventureland is the biggest and most heterogeneous thematic area; it contains worlds completely different from one another, with rides and buildings based on *Indiana Jones*, *Pirates of the Caribbean*, *Aladdin*, *Robinson Crusoe*, and *The Lion King*. The area is characterised by a thick vegetation - varying between autochthonous species and tropical plants - and a big artificial lake with a central island that is connected to the shore by numerous suspension bridges.

1.4 *Fantasyland*

Passing through the *Sleeping Beauty Castle*, the visitors then reach *Fantasyland*, dedicated to Disney's tales and animated classics. The castle's yard is dedicated to king Arthur and the carousel - as the name *Le Carroussel de Lancelot* suggests - to Lancelot. *Fantasyland* includes attractions dedicated to *Alice in Wonderland*, with a hedge maze leading to the *Queen of Hearts' Castle* and a ride with the spinning teacups of the *Mad Hatter*. Additionally, there are some *Dark Rides*² with cartoon cut-outs of the characters from *Snow White*, *Pinocchio* and *Peter Pan*. All Disneyland parks' *Fantasyland* areas include "It's a Small World", an attraction created for the *New York World Fair* in 1964-65, which celebrates the children from all around the world by playing the homonymous song.

1.5 *Discoveryland*

A path surrounded by streams running through a Moon-like setting links the *Central Plaza* to *Discoveryland*. The buildings in this area are inspired by Jules Verne, George Méliés and Leonardo da Vinci, and recreate what past eras imagined the future would look like. *Discoveryland* is broadly dedicated to the *Star Wars* franchise and to *Toy Story's* Space Ranger *Buzz Lightyear*.

2 Analysis of the Lands

Aside from being the only connection from the entrance gates to the centre of the park, the *Main Street* is a shopping area where visitors can buy gadgets and souvenirs and rent wheelchairs or strollers for

² Rides and attractions on rails or water that run through buildings are generally called *Dark Rides*.

people with reduced mobility. There are also several bars and stands for quick meals or proper restaurants for a more relaxed lunch or dinner. Making the visitors walk through a commercial street in order to motivate them to buy gadgets or other services is a typical element of amusement parks.

J.B. Kaufman (b. 1955), a Cinema historian and author of numerous books about the Disney universe, argues that the *Main Street's* architectural structure must be alluring and pleasant to the public, and this is the reason why

the buildings of the *Main Street* appear to us as playhouses and encourage us to enter them, but their interior is always a concealed supermarket, where people buy obsessively under the impression that they're still playing a game. (Eco 1977, 54; transl. by the Author)

The idea of buying *while* playing is often an integrated part of rides and attractions, some of which directly lead to the stores that sell dedicated merchandising. Based on this, it is safe to assume that of the fundamental characteristics of the Disney Parks experience is the naturalisation of consumerism. Kaufman additionally argues that this is favoured by an architectural style that is more effective than a traditional one: the pavements are coated with a special, colourful layer that is more elastic than normal asphalt, allowing the visitors to walk for longer periods without straining their feet or getting tired. The *Main Street* has also been mapped out specifically to make its cleaning more efficient, meaning that the area is always particularly tidy despite the daily thousands of visitors that cross it.

2.1 *Main Street, U.S.A.'s* Soundscape

In the book for *Disneyland's* 25th anniversary, a passage on the *Main Street* states:

Ce sont les plus discrètes de toutes les musiques des parcs Disney. Pourtant, elles ont toutes leur importance. Les musiques d'ambiance de Disneyland Paris vous accompagnent discrètement à chaque instant de votre visite. (*Disneyland Paris de A à Z*, 2017, 223)

The adverb 'discreetly' is used loosely: music is always present everywhere and, especially in the *Main Street*, the visitors can have the impression that the background music is played at a higher volume than in other areas of the park. This is incorrect, as the average dec-

ibel level of 80 dBs³ is consistent throughout the entirety of *Disneyland*. It is likely that the perceived loudness is caused by the rhythmic assortment of the songs, ranging from 70 to 120⁴ BPMs, which is consistent with the setting in time and place recreated.

Unlike other areas, *Main Street* does not have mechanical rides or carousels playing music, but there are two attractions that convey the feeling of travelling back in time to the nineteenth century: the *Horse-Drawn Streetcars* and the *Main Street Vehicles*. The formers reproduce the clapping of horseshoes on the ground, while the latter are accompanied by the sound of an internal combustion engine and the horn of an old car, which is used as a warning for pedestrians that may inadvertently walk too close to the moving cars. Both attractions function as actual transportation means, taking the visitors from the park's gates to the Central Plaza.

If the whole area were to be analysed according to Bernie Krause's category system (Krause 2012), it would be described as "lacking any geophonic or biophonic sounds" - with the exceptions of the occasional *Horse-Drawn Streetcars* passing - in favour of anthropophonic sounds. The music genre is consistent through all shops, though each one plays a specific playlist with a slightly lower volume than the *Main Street* itself.⁵

3 The Relationship Between Architecture and Soundscape

The architecture of the *Main Street*, along with the musical choices, encourages the phenomenon of 'impulse buying': the visitors are drawn to the unplanned buying of goods that are certainly not part of their prime necessities. These impulsive purchases are among the main forms of economic profit for amusement parks.

There have been numerous studies on the relationship between architecture and soundscape, starting from McClelland (1951) and Berlyne (1971; 1972). The *optimal arousal theory* was formulated based on their findings: a small addition to the environment, such as the introduction of background music or a faint scent, can enhance the sensorial experience of the clients in a shop. The combination of these two elements has the effect of creating a positive 'relationship' between the visitor, the store, and its services - ultimately increasing the likelihood of impulse buying.

³ Average value measured between December 19 and 22, 2018, in different times of the day.

⁴ See fn. 3.

⁵ See fn. 3.

The *optimal arousal theory* is also supported by Anna S. Mattila and Jochen Wirtz (2001) in *Journal of Social*, who highlight how any incongruence between soundscape and architecture results in the environment feeling heterogeneous, with an overall lower quality of the buying experience of the clients. The two authors propose that:

When the arousal qualities of two ambient cues match (that is, high (low) arousal scent and high (low) arousal music), this stimulus congruency should lead to an enhanced perception of the Servicescape. Conversely, incongruence between the ambient factors (that is, high (low) arousal scent and low (high) arousal music) should have an adverse impact on consumer perceptions of the environment, including approach and impulse buying behaviours and satisfaction. Consequently, we propose the following:

H 1: Matching arousing dimensions of scent and music (i.e. high/high or low/low arousal conditions) will lead to enhanced a) pleasure, b) approach, c) perceived positivity of the store environment, d) impulse buying and e) satisfaction, compared to mismatch conditions (i.e. high/low or low/high). (2001, 278)

An alternative theory on the ambiance's incongruence argues that, when faced with stimuli that are slightly different from their expectations, people tend to look for additional information on a specific product, effectively spending more time on the buying process and avoiding an impulsive purchase (McKinney 1996).

4 From the Central Plaza to *Discoveryland*

The transition from *Main Street, U.S.A.* to the *Central Plaza* to the futuristic area of *Discoveryland* is anything but consistent from a sonic point of view. Although the areas are not separated by physical doors or gates, the background music for *Discoveryland* can be heard as soon as visitors leave the *Central Plaza*. Additionally, there are several waterfalls, which are able to overpower the different music and create a strong geophony. These natural sounds are intrinsically and culturally relevant to visitors, since they confer an artistic and aesthetically pleasing feeling to the place, even though an amusement park can be considered a 'non-place'.

It is important to note how geophonic sounds directly affect people's ability to form a connection with nature. The US federal National Park Service, which takes care of national parks, monuments, and other protected sites, underlines the importance of uncontaminated soundscapes:

The Service will restore to the natural condition wherever possible those park soundscapes that have become degraded by unnatural sounds (noise) and will protect natural soundscapes from unacceptable impacts.

Using appropriate management planning, superintendents will identify what levels and types of unnatural sound constitute acceptable impacts on park natural soundscapes.

The frequencies, magnitudes, and durations of acceptable levels of unnatural sound will vary throughout a park, being generally greater in developed areas. In and adjacent to parks, the Service will monitor human activities that generate noise that adversely affects park soundscapes, including noise caused by mechanical or electronic devices.

The Service will take action to prevent or minimize all noise that through frequency, magnitude, or duration adversely affects the natural soundscape or other park resources or values, or that exceeds levels that have been identified through monitoring as being acceptable to or appropriate for visitor uses at the sites being monitored.⁶

Although *Disneyland* is clearly not a natural site, Walt Disney and his brother, Roy Disney (1893-1971) mostly anticipated these norms from the inauguration of the first park, treating it as an actual 'place'. Both brothers were very much aware of the how human senses are engaged by natural sounds, which provide information about the elements in the surrounding environment: a decent amount of information about a situation is conveyed through sounds. Because of this, a natural environment is the richest phonic soundscape that human beings can possibly experience.

When analysed through this perspective, Raymond Murray Schafer's works acquire new relevance (Schafer 1977). Schafer argued that urban soundscapes convey very little acoustic information and increase a sense of separation between nature and mankind: the sounds in a natural environment are not something people instinctively avoid, e.g. intense honking of car traffic, but rather something that is desired and appreciated.

5 *Discoveryland's* Soundscape

Discoveryland is the area with the highest concentration of rides and attractions, most of which are of modern construction. Because of this, a lot of people visit them, often resulting in unpleasant crowds

⁶ <https://www.nps.gov/orgs/1548/upload/ManagementPolicies2006.pdf>.

forming during peak moments of the day. Such crowding negatively impacts the decisional process of visitors, who are given the feeling of a less pleasant experience and a lack of control, resulting in a reduction of the overall time spent in the stores and, consequently, of the purchases (Hui, Bateson 1991).

In general, crowds outside of a store around the world are considered out of the management's control, but in the perspective of *Disneyland Paris* big crowds are an issue that affects all the rides and additional services offered by the park. Crowding generates dissatisfaction in the visitors and must be avoided as best as possible. An attempt to compensate for these situations, giving the visitors the impression of a less busy area, consists of external stimuli that shift the attention from the issue and generates positive feelings through colours that transfer the attention and encourage purchases (Singh 2006). In fact, colours have been found to influence more than half of the unconscious expectations of a potential buyer in a new or unfamiliar shopping context. Different colours can stimulate a variety of emotions and feelings that cannot be consciously controlled. The perception of crowding partially depends on the complexity of the internal and external design and can be tweaked through the variation of colour of the room and building (Bauma, Glenn 1976).

Colours can generally be divided into two categories: warm colours, which include red, orange, yellow, and cold colours, which include green, blue, purple. White is generally considered a neutral colour. Warm colours are emotionally stimulating and distractive, whereas cold colours - especially blue - convey a feeling of tranquility, calm and pleasantness. It is notable that red has an influence not only on the psychological level, but also on the physiological one, and has been observed to directly influence blood pressure, respiratory frequency, and skin conductance.

The colours that dominate the exterior of a building are an important factor in the visitors' response. Bellizzi, Crowley and Hasty (1983) conducted an experiment on the response to the exterior design of shops by observing how the perception of crowding changed for two stores, whose outside was respectively painted in orange and blue. Additionally, they studied the effects on the perceived quality of product and service based on the different colours for the same setup in the storefront windows. While the level of crowding was consistent outside of the two stores, the blue store window led to a reduced perception of it. Additionally, the calming feeling caused by the colour blue gave the clients the impression of a higher quality of the service and goods. Overall, people belonging to the test sample that interacted with the blue themed store were more motivated and positively influenced in their shopping intentions (Bellizzi, Crowley, Hasty 1993).

Considering these factors, the prevalence of cold colours (blues and greens) in the buildings and neon light-shaped LEDs in *Dis-*

coveryland does not come as a surprise. The deliberateness of this chromatic choice becomes especially apparent when comparing *Discoveryland* to the corresponding areas in other Disney amusement parks – called *Tomorrowlands* – that are strongly based on the colour white.

Colours are not the only factor that plays a role in altering the perception of a crowd, masking it as a more pleasant experience. As seen in previous paragraphs, the close interaction between the architectural choices and the soundscape generates some additional stimuli. These can vary depending on the parameters of value, intensity and complexity.

1. Value depends on the ability of the client to discern between different colour hues, differentiate a happy song from a sad song, and overall *evaluate* the usefulness of the various environmental information.
2. The intensity of a stimulus can be controlled through the choice of colours and possibly the addition of a scent in the environment; from a musical point of view the effect is achieved through the choice of tempo and volume (Fei-Fei, Wu, Yen 2009).
3. Complexity takes into consideration *how* visitors elaborate a stimulus (e.g. the likelihood of clients remembering a song, correctly interpreting a colour scheme or combination).

Studying these three elements can help with creating a general atmosphere in a store, since any incongruity between these factors can interfere with the visitors elaborating the information. These studies help with the interaction of different elements in an environment, as proven by the classical study by Grewal (b. 1966), who associated classical music to the purchase of jewellery “because it ‘fits’ the context of luxury goods” (Dhruv, Levy, Voss 2003).

In the case of *Discoveryland*, David Tolley mixed classical Victorian themes with more modern compositions, adding in electronic sounds that create a strong congruence with the surrounding area. This is achieved because in the general mental imagery, electronic music is associated to cold colours and is well paired with the flickering lights present in the area.

6 The Music in the *Sleeping Beauty Castle*

The *Fantasyland Castle Medley* was specifically produced in 1997. It includes *A Dream Is a Wish Your Heart Makes* (Cinderella), *When You Wish Upon a Star* (Pinocchio), *Once Upon a Dream* (Sleeping Beauty) along with classical ballet pieces by the Russian composer Pyotr Ilyich Tchaikovsky. The background music is heavily present and ful-

ly coherent with the architectural style of the Disney world. The creator of the medley unknowingly included a high variability of tempo, with songs switching between binary and ternary pace and ranging between 40-85 BPMs. This combination results in a pleasantly tranquil and relaxing environment, with an additional observed effect on the pace of the visitors: SPM (steps per minute) and BPMs are positively related, resulting in a faster walking pace when a song with higher BPMs is playing in the area.

7 *Fantasyland's* Soundscape

One of *Fantasyland's* strongest features is the sensorial stimulation that involves sight, smell, touch, and hearing. The most stimulated sense in the area is certainly sight, thanks to the heterogeneous architectural style. The visitors are visually overstimulated by the abundance of decorations, colours and finishes typical of the composite nature of *Fantasyland*.

Scents and fragrances in *Fantasyland* are few and mainly associated to sweets. In general, it is challenging to find a corpus of studies on the relationship between human behaviour and environmental olfactive stimuli. An experiment that can be considered relevant to the topic was conducted on the connection between the smell of the freshly baked panel and the increase in its sales. The scarce documentation is likely due to the fact that the reception of smell is highly depending on external factors, such as meteorological conditions and atmospheric pressure: a change in rain or wind direction can easily distort the perception of scents.

Touch might feel like a secondary sense, but the whole area was designed to be 'touched'. Visitors are encouraged to actively engage with the attractions; in fact, *Fantasyland* has the highest concentration of rides that require physical interaction with decorations (e.g. the Sword in the Stone), gadgets in the stores and even with the building themselves (e.g. wooden bridges, house bricks, trees etc.). No objects are packaged or put into protective glass cases.

From a sonic point of view, the area's soundscape is particularly rich: there is a variety of background music playing through speakers positioned around the walking paths and on garden decorations. However, *Fantasyland* still has some peaceful spots inside the stores that are less intense and were planned for human interaction. In these areas, the environment is filled by 'white noises', sounds coming from the service areas or from the working machinery of the rides.

Walt Disney intended to create something that would be equally fitting for children *and* their families, uniting them through an attempt to bring back childhood memories in the adults. The involvement of adult visitors into the Disney experience has played a crucial

role in the commercial success of Disney parks (Bryan 1995), and it would be safe to say that this attempt has been a success: only about 25% of overall visitors in *Disneyland* are children (Findlay 1940).

Animated movies use a language that is often pedagogical and filled with metaphors, but this does not happen in *Disneyland* – at least on a visual level – since the whole area is easily interpretable. This ‘interpretive simplicity’ is obtained through alteration of the dimensional scale of the buildings and a manipulation of visual perspective. The latter is important for an improved natural landscape: right angles are tighter, intersections and building sides are rounder. These modifications lead to a reduced perception of sharpness and rigidity, making the buildings less imposing and, consequently, resulting in a more comfortable experience of the visitors (Koenig 1994).

Walt Disney loved the process of miniaturisation that characterised many of objects of his childhood and was also a collector of small-scale reproduced objects. Applying the same principles of miniatures to *Disneyland*, Disney intended to appeal to the regressive instincts of adults. The same effect of ‘infantilisation’ is achieved in the parks through the technique of forced scalar perspective, in which:

- first floors in houses are about 90% (9/10) or the real model.
- second floors are 80% (7/8).
- third floors are 70% (5/8) (Bryman 1995).

This process is applied to the entire amusement park, but it is particularly noticeable in the *Main Street* and in *Fantasyland*, where everything – not just the buildings, but also trees, rivers, and trains – is ‘shrunk’. This results in an environment that looks normal at a first glance, but still achieves a child-appealing result, with an effective ‘infantilisation’ of the visitor. This mix of elements (adult-like and child-like, realistic and fantastic) is reinforced by the pleasant feeling that adult visitors experience while discovering the thematic areas that make up every Disneyland park.

The combination of all these visual, auditory, tactile and olfactory stimuli positively influences the attitude of visitors towards the stores, amplifying the relationship between the internal designs and the merchandise.

According to a study by Steven M. Smith from the Texas A&M University, music plays an important role in memory and memorisation (Finke, Ward, Smith 1992). These findings confirmed previous research conducted by Weinberger in 1995, which demonstrated that playing the same background music during the studying process for an exam and the exam itself enhances the cognitive processes that are involved in recollection. On the other hand, playing different songs would minimise the ability to remember learned concepts (Weinberger 1995).

The fact that music has the ability to create links to memories through pre-rational processing is employed in *Fantasyland* for com-

mercial reasons: the aim is to communicate with the visitors at an emotional level and take advantage of their childhood memories. In order for music to become an effective communicative tool for purchases, it must absolutely interact with all physical senses, including touch, sight and smell. These are, coincidentally, the same senses children use when exploring the world.

Sensory stimuli play a critical role in memories and emotions linked to human experiences. This has been exploited by marketing companies through the concept of *sensory branding*, a sensory 'label' that is attached to products or to the products' brand. This strategy stimulates and improves imaginative and perceptive skills by creating emotional links between the buyer and the franchise. Sensorial stimuli can motivate the purchase-related behaviours of consumers, sparking their interest and allowing emotional responses to take over their rational thought processes (Weinberger 1995):

We accept the bird sounds coming out of the loudspeakers in Disney parks, and we may even buy a video of birds hopping about and chirping for our indoor cats. Perhaps we do so because these are components that fulfil the perfect illusion that we pay to become part of. Even though the sounds and smells may be artificial they are part of the real illusion. Authenticity within a sensory branding context can be pinned to four individual and very subjective factors. These four 'R's' will help you identify the authenticity of your sensory approach. They offer a starting point and serve as your authenticity guide. Real + Relevant + Ritual + Recital. (Lindstrom 2005, 115-16)

When the sensory experience is well orchestrated it can become extremely effective, and this is exactly what happens in *Fantasyland*: thanks to the alluring *ambiance*, visitors are willing to repeatedly visit the park in order to go through the same experiences again and again. An internal narration of previous experiences - built through the animated films by Disney itself - guides the stay of the visitors inside the park, creating a connection between previous and current emotions. "The experience of enjoying a great story is a powerful one that pulls in all of our senses and immerses us so that we feel as if we are actually living the story" (Healey 2008, 28).

This stimulation had a direct effect on consumerism and buying behaviour and cannot be only examined at a purely abstract level. It is not by chance that most of Disney's classic is concentrated in *Fantasyland*: the impact on visitors is enhanced by the personal history they have with the Disney brand and its products (Healey 2008). A generalised and collective *Sensory Branding* leads to such a sense of satisfaction that it consolidates the relationship between visitor/customer and the Disney franchise, characters, films, and all the mental associations to the name of the brand itself (Hellman 2009).

8 Concluding Remarks

The elements present in the thematic areas have a precise role and have been carefully disposed with the intention of creating a well-perceived impact. Massara and Pelloso (2006) have introduced the concept of *macro*, *meso* and *micro* environment in retail. *Macro* environment refers to all the variable elements outside of a store; *meso* environment comprises those relative to the internal design of the building. Finally, *micro* environment refers to the elements with which clients come directly in contact, such as shelves and tabletops.

Disneyland has all three environments: *macro* includes the thematic areas, *meso* the variations in the lands (e.g. the pirate area in *Adventureland*, the 'Italy area' in *Fantasyland*) and *micro* refers to the hotel, the stores, and the rides.

This structure has a strong impact on the memories related to the visitors' experience, from *meso*-environmental elements (e.g. the floor and ceiling paint or finish) to *micro* environment elements (e.g. the product packaging, the shelves etc.). The overall judgement of these factors will be associated with the brand in the visitors' mind.

The sensorial experience will be mainly focused on the internal parts of the *meso* and *micro* environment, meaning what will be remembered (i.e. if the area was tidy, cared after, if the lighting was adequate etc.). The success of Disneyland strongly resides in the care for all these small details and the overall soundscape, always contextualised in order to create a more pleasurable buying experience for visitors.

Alessio Calandra

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Venetian Lagoon Mussel Farming Between Tradition and Innovation

An Example of Changes in Perception and Multispecies Relations

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Abstract In Venetian lagoon, mussels as a food, together with technical innovations and new knowledge for their exploitation, are a recent discovery. In the past, the lagoon's fishers considered them inedible. The first mussel farming was launched in 1939 and mussels began a new process of rehabilitation. It is the beginning of a new relationship. Mussels turn themselves into delicate animals that need care and fishers develop new interactions with the other non-human components of the environment. A mutual relationship (or *inter-agentivity*) is created between mussel farmers and mussels, and it brings undeniable advantages to both species.

Keywords Knowledge innovation. Local ecological knowledge. Mussel-farming. Venetian lagoon. Multispecies relations. Popular animal's classification. Environmental knowledge. Anthropomorphism. Food acculturation. Inter-agentivity.

Summary 1 Introduction. – 2 The Venetian Lagoon: A Cultural Point of View. – 3 The Classification Matter: The Mussels' Case-Study. – 4 The Mussels: From Poisonous Food to Appreciated Food and Source of Well-Being. – 5 Changes in Perception: Are Mussels a Pest, Animals to Care For, or 'Stuff' for the Market? – 6 Anthropomorphic Visions and Metaphorical Constructions. – 7 The Mussels' Reproduction: A Mysterious Matter. – 8 Conclusion.



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1 Introduction

This essay focuses on the changing of perception and relationship between the mussel farmers and the mussels in the Venetian lagoon. This subject emerged during my ongoing PhD research on the development of mussel-farming in the Venetian lagoon and in North Brittany, where I investigated local knowledge and particular conditions on the topic from 2010 to 2014. Later on, I also carried out new field research in the place (which is still ongoing).

In Venice, mussels (*Mytilus galloprovincialis*, Lamark 1819) are a recent discovery as a food, and they are responsible for the adoption of technical innovations and acquisition of new knowledge needed for their exploitation. In the past mussels were suspected to be indigestible and sometimes even toxic across Europe. The lagoon's fishers also considered them inedible and called them with the Venetian derogatory term, *peòci*, that is lice, and they are still called in this way today. It is thanks to the fisher Alfredo Gilebbi that mussel-farming was first launched in 1939 in the lagoon. This was the beginning of the 'rehabilitation' of this black mollusc from its ambiguous past. Today, mussels have become an important local commercial product. It is the becoming of a new source of economic well-being for the fishers of the Southern Lagoon. During my research, mussel farmers describe the mussels as delicate organisms during their growth process. Some mussel farmers equate young mussels to human babies. These words represented my starting point for investigating the mussel farmers' interpretations of the relationship and perceptions about this mollusc, and their transformations in time. Their accounts describe a big variation in the way this animal was perceived with respect to the past: once considered venomous and invasive, contemporary farmers perceive them to be a healthy and natural food. Moreover, their accounts describe young molluscs as a delicate organism to care for, to later on become 'stuff' for the market when they are fully grown.

The aim of this article is to retrace and describe the change in fishers' local knowledge and perception about this species. This process is developed by the fishers thanks to their interactions with the other human and non-human components of the environment. The research presented here is based on qualitative anthropological methodology, such as semi-structured interviews with residents, fishers and mussel farmers. All quotations from these sources in the text are translations by the Author. The article is also informed by the critical reading of various texts on the topic (including social media content, newspaper articles, blogs and video programmes). It is also an exam-

ple of auto-ethnography¹ – a recent approach to anthropological studies in which the experience of a scholar her/himself becomes an object and a part of the analysis – and in which my personal engagement with the local socio-cultural and political context is also analysed.

2 The Venetian lagoon: A Cultural Point of View

The Venetian lagoon is located between the sea and the mainland. Due to its location, it is unstable and, in many respects, it entirely embodies what has been identified as the “hybrid” nature of deltas (Lahiri-Dutt 2014). Over the centuries, many local communities have depended on the exploitation of aquatic resources developing appropriate fishing techniques and their own culture distinct from the farming one widespread in the Venetian hinterland.

Local fishing is characterised by the continuity of fishing techniques that seem to cross – albeit with small personal adaptations and innovations developed over time by fishermen – the modern and contemporary age up. Today, the small-scale fishing activities in the lagoon, also including mussel farming, have remained multi-specific and multi-instrumental, that is, directed towards various types of products and adopting multiple techniques. This type of fishing is commonly defined as ‘traditional’ because it still uses artisan techniques and tools of the past. By the term ‘tradition’ we mean something that maintains constant references to its past origins, and the prevalence of experience over innovation that is generally rejected as a potential source of risk. Folklore studies show us that a tradition is not something immutable over time, which always repeats itself in the same way. Actually, even a tradition is subjected to change, undergoing adaptations and contaminations when it comes into contact with other realities. Except that the innovations within the tradition of the past generally manifest themselves slowly (Sanga 2006, 453). The innovations within a tradition are long processes. This makes their observation and detection difficult, but that does not mean they do not exist.

Many of the characters locally defined as traditional are also found in other lagoon areas. This is the case, for example, of the San Gilla lagoon in Sardinia studied by Franco Lai (2020) and with which numerous elements of comparison can be encountered. This leads us to

1 Ellis, Adams and Bochner describe autoethnography as “an approach to research and writing that seeks to describe and systematically analyse (*graphy*) personal experience (*auto*) in order to understand cultural experience (*ethno*) [...] This approach challenges canonical ways of doing research and representing others [...] and treats research as a political, socially-just and socially-conscious act. A researcher uses tenets of *autobiography* and *ethnography* to *do* and *write* autoethnography. Thus, as a method, autoethnography is both process and product” (2010; italics in the original).

hypothesise the existence of a real ‘culture of lagoon’. As we know, there are many cultural aspects that develop from the interaction between man and the environment in which he lives. As for the aquatic spaces among the islands, it is important to dispel the prejudice that water is a separating factor among communities and their cultures. Actually, it has been shown that aquatic spaces must not be interpreted as a separating factor, but rather they must be understood as a unifying factor and a source of cultural interaction between small social groups. The conceptual gap has been filled thanks to the concept of *aquapelago*, a recent interesting approach to Island Studies developed in the last decade by the Australian anthropologist Philip Hayward (2012a; 2012b). Hayward explains that an aquapelagic assemblage is:

a social unit existing in a location in which the aquatic spaces between and around a group of islands are utilised and navigated in a manner that is fundamentally interconnected with and essential to the social group’s habitation of land and their senses of identity and belonging. (2012a, 4)

Based on the testimonies collected by fishermen, the waters of the Venice lagoon with the communities that its islands host can fall within this definition by right. The lagoon is in fact characterised by an essentially aquatic and insular type of life that develops in the terrestrial and aquatic dimensions. This implies a very close relationship – we can venture ‘symbiotic’ – between the inhabitants and the water, which becomes the privileged space for the daily practices of the islanders. According to geographer Cavallo, it is this intense relationship between humans and water that characterises the inhabitants of the lagoon at a cultural level. It is a symbiotic relationship that provides the inhabitants of the lagoon with a sense of identity and belonging by transforming a person into a ‘Venetian’ (Cavallo 2015).

A further interesting aspect that confirms the presence of a specific culture is given by the configuration of the lagoon, or rather of the lagoons, as a space domesticated by fishing by means of its tools (and in the past also for hunting and salt production). This is what Lai, referring to San Gilla, defines a historical ecosystem, taking up a work by the historian Caracciolo (1988). In fact, what we observe today in the lagoon is a landscape erroneously perceived as shaped by natural elements because actually it is largely shaped by man (Vianello 2021, 95). It should not be forgotten that in the centuries of the Serenissima Republic the respect of ‘ecological’ constraints was a fundamental aspect that had to be considered by the organisations of work and it was enforced by the government, in order to preserve

the delicate balance that characterised the wetlands.²

For the Venetian fishermen, the hybrid spaces of the lagoon are experienced as an extension of the emerged lands. Fishermen often associate the lagoon area with a rich and fruitful ‘countryside’, meaning by this term a place that is both safe, protected, and rich in resources. They also use the definition of countryside to emphasise its contrast with the open sea, which is experienced as the space of danger, and otherness, the place where the nuance between life and death is thinned. The sea is never conceived as a domestic entity, unlike the lagoon that is like a countryside.

Finally, the acquisition of knowledge about the environment seems to take place among fishers thanks to the network of interactions that they build with other human and non-human components (fish, plants, water, air, rocks, sand and so on) that coexist here. The Venice lagoon and its fishermen and mussel farmers represent a concrete example of the mutual relationship between humans and environment hypothesised by Ingold (the *inter-agentivity*), a perceptive requiring a direct involvement with the environment, where each organism perceives the other components belonging to that same world in a different way (Ingold 2000, 166). For a long time, anthropology has considered animals exclusively under the symbolic aspect, therefore from a purely human point of view. Animals are sentient creatures with which man has always interacted socially, just as we do among us humans. According to Ingold, it is necessary to develop a new anthropological approach that considers the social relations of animals and with animals, an anthropology that knows no divisions between man and organisms, between social and ecological relations, ceasing to consider humans as something distinct. What we humans need today is what Ingold calls “relational thinking”, that is, to consider organisms as places of growth and development within a continuous field of relationships. Only by accepting this new concept can we understand that we humans are part of the whole, we participate in a continuous organic life just like all other organisms (Ingold 2016, 79). According to him, this approach would make it possible to overcome the nature-culture dichotomy formulated by the father of structuralism, Claude

2 In past centuries, numerous interventions were carried out by the Serenissima Republic of Venice in order to maintain the equilibrium of this unstable place. This is a structural instability that local fishers are well aware of. Fishers have the proverb that roughly translates as “even a pole can create a swamp” (to highlight that any small change can have effect on the geomorphology of the lagoon), noting that the lagoon has its own very delicate balance that must never be altered, at risk of drastically transforming it. However in the last 150 years, human activities have contributed as never before to profoundly change the lagoon. The lagoon has been subjected to invasive series of anthropic interventions in the name of progress and modernity, the latest of which is the MOSE system. But this is another story (Vianello 2021).

Lévi-Strauss³ – because the perception and relationships of mutualism are never immutable, and in some cases, they may totally change over time, as I will describe in the case of mussels.

3 The Classification Matter: The Mussels' Case-Study

In the second half of the Twentieth century a new theoretical perspective developed in anthropology: ethnoscience emerged as an approach to research that aims to investigate the ways in which local knowledge about the natural world is distinguished, classified and organised.⁴ Local knowledge systems are no longer seen as irrational beliefs and collection of oddities, and anthropology promotes the recognition of their internal coherence and complexity. The anthropologists following the ethnoscience approach meticulously collected the terminologies with which the natives classify the different areas of their reality, and investigated the ways in which the different domains of knowledge about the natural world are formed, gathered, differentiated and organized. Distinct undercurrents arise from ethnoscience, such as ethnobotany (of which Brent Berlin and Paul Kay's 1969 research on colour perception is a classic example), ethnozoology, ethno-medicine. Ethnoscience was later criticised as starting from an ethnocentric assumption, because the data collected, often in very detailed and refined collections, used the models and classifying categories produced by Western science as a non-negotiable framework of reference (Bloch 2000, 340). After scholars' efforts in ethnoscience to build a great theory of cultural knowledge, researchers began to prefer to study comprehensive cultural models with the ambitious aim of describing the human organisation of the knowledge. In a later time, the ethnoscientific perspective was abandoned, and the studies on how humans perceive the different domains of the world in which they live moved towards more interdisciplinary approaches. It is the case with the theory of cultural schemes adopted by cognitive anthropologists and borrowed from psychology (Tassan 2020, 49-51). According to this theory, individuals who

3 Let us recall, summarising, what Lévi-Strauss (1908-2009) meant by the term "nature", the dimension of instinct and biological need, in opposition to the concept of "culture" by which he indicated the world of normativity, the set of rules, behaviours techniques, beliefs and institutions required to an individual in order to confirm the belonging to his own group (1969, 46).

4 Later, starting from the 1990s and with the birth of environmental anthropology, this approach took on new contours and began to focus on the historical and political dimension of the relationship among humans, environment and resources. As Manuela Tassan observes, in the post-modern climate of the anthropological debate of that period, scholars begin to question the conflicts and power relations that arise from the appropriation of resources (Tassan 2020, 46-50).

recognise themselves as belonging to the same culture possess and share mental schemes in which to group sets of similar elements that can be traced back to a general idea (Bloch 2000). For example, there would be a scheme within which everything that can vaguely lead to the idea of 'home' is included: shelter, hut, apartment, castle, and so on. In practice, everything would be organised into distinct categories (or domains) that men use to classify and order their world. Another recent approach to the study of classifications comes from the so-called prototype theory. This theory assumes that the identification of a distinct cultural domain is based on a particularly representative prototype; prototypes are something highly exemplary, very typical, or as Bloch states the best examples of specific cases (Blount 2011, 15-20; Bloch 2000).

Among various undercurrents that arose from ethnoscience, studies on traditional ecological knowledge, TEK (also known as traditional environmental knowledge) emerged in the 1980s. Formerly, TEK studies were used in anthropology to describe the traditional knowledge on the cumulative indigenous body of knowledge, belief, and practice concerning the local resources (Madden 2015). The feature of this approach is that TEK lends itself to a large interdisciplinarity. For example, the TEK approach is also used today in natural resource management as a substitute for baseline environmental data or to complement Western scientific methods of ecological management, or to provide information about climate changes. Being that TEK studies the relationship of human-beings (and non-human too) with their environment, researchers from different scientific frameworks are using them as an alternative information source to study the emerging changes in biodiversity. However, their application in the field of ecological management and science is still controversial - because of the qualitative methods of acquiring and collecting knowledge and because it is reasonable that not all the subjects and episodes are equally retained by the actors. As argued by a study on fishing in the Mediterranean Sea, the capturing of 'new fish' is a special event that is easily remembered by the fishers (Azzurro, Moschella, Maynou 2011). This media property of species 'never seen before' may increase the potentialities of TEK in monitoring tools for unusual occurrences that are typically difficult to monitor. According to the authors, this possibility should be seriously taken into consideration due to the increasing need to approach large-scale patterns in the marine environment (such as species distribution shifts under climate change scenarios).⁵

5 Begossi writes that the management of local artisanal fisheries is a necessity because it provides an additional benefit, considering that decentralisation and the use of TEK in management have given better results than centralised top-down manage-

Given this brief theoretical synthesis on the main approaches to human classification systems of the world in which human-beings live, we will address the case study on the perception that fishers and mussel farmers have on their environment, resources and specifically on mussels.

The fishers of the Venice lagoon still maintain their own classification system distinct from that used by our scientific taxonomies (and no less complex). It has emerged from the interviews that this knowledge is partly transmitted by the elderly and partly based on empirical observations collected during daily work. It is noted from the first approach that the classificatory interest is mainly aimed at the species subject to commercial interest and has a utilitarian purpose. Consequently, even today, despite the higher education most of them received, it is not uncommon for fishers to include fish, molluscs and crustaceans in one large family: the fish.

Sometimes fishers express some doubts because they do not know if the molluscs with shells belong to the category of fish or to something not well identified; they live in the water but are unable to swim and move like fish. These shelled molluscs are considered crustaceans by fishers, just like crabs, lobsters, shrimps and anything else that has a rigid coating around the body. It seems precisely that this characteristic, namely the possession of a 'crust', as the fishers call it, is the factor that unites very different species.

Having said this, the distinction adopted by Venetian fishers for the classification of fauna appears to be mainly linked to its habitat. So, we find for example: bottom fish, divided in turn into sand fish and mud fish; stone fish, if they live in a rocky area, flying fish for fish that make seasonal migrations. These are permeable categories among which a species can move according to its seasonal habits or according to where they are captured.⁶

It is a habitat-based classification system that will be extended also to mussels from the moment they begin to have a commercial interest. To give a practical example, fishers and farmers distinguish those they call 'iron mussels', that is, those that grow attached to an iron support, from 'wood mussels', such as those that grow for exam-

ment. She adds: "several examples illustrate the utility of applying TEK in these contexts, wider application of TEK - derived information remains elusive. In part, this is due to continued inertia in favor of established scientific practices and the need to describe TEK in Western scientific terms. In part, it is also due to the difficulty of accessing TEK, which is rarely written down and must in most cases be documented as a project on its own prior to its incorporation into another scientific undertaking. This formidable practical obstacle is exacerbated by the need to use social science methods to gather biological data, so that TEK research and application becomes a multidisciplinary undertaking" (Begossi 2008, 591-603).

⁶ Interview with G.B., 19 June 2013.

ple on *briccole* (the wooden poles that mark the routes of the navigable channels). Based on this distinction, we find the ‘mud mussels’ and the ‘stone’ ones that live on the rocks. According to the judgment of the fishers, the place where the mussels live affects their taste and the quantity of meat developed, as well as their healthiness. In fact, there is a widespread belief that mussels that grow on iron supports can be bad for one’s health (Vianello 2018).

Within the local classification criteria, a further relevant distinctive criterion is linked to the measures of the prey, which often take on different names depending on the age. In turn even the mussels begin to take on names based on age. Replicating an already known pattern, they are divided into ‘sowing’ or ‘seed’ (in Italian *semina* or *seme*), when they are small in size (approximately 1.5 cm), *peòcio mešàn*, medium mussel (approximately 3-4 cm) and *peòcio maturo*, mature mussel, when it reaches the commercial size of five centimetres.

On the basis of this research and previous surveys, these age subclasses are found almost exclusively among edible species, in particular among those most fished or of greater economic value, to underline once again the predominantly economic-utilitarian purpose of the fishers’ knowledge on marine fauna. In actual fact, everything that lives in the sea that is not useful for the purposes of fishing or harvesting, even if only as a simple bait, does not seem to receive too much attention and even less care is placed into sub-categories on the basis of its habitat or age and measure, or even of the sex or the particular phase of life. They generally tend to dismiss anything that is not deserving of excessive commercial interest as ‘crazy stuff’ (*ro-ba matta*), in the sense of something that is not good to eat.⁷

4 The Mussels: From Poisonous Food to Appreciated Food and Source of Well-Being

Since the 1950s the development of mussel-farming in the Venice lagoon has brought with it a new market and business, as well as a new socio-cultural dynamic. In the past, the inhabitants of Venice perceived mussels as an unhealthy food and mussels were considered inedible and sometimes poisonous. We have found historical reports about their unhealthiness in eighteenth century texts of Venetian naturalists Chiereghin and Olivi (Chiereghin 1778-1818; Olivi 1792).

⁷ It is interesting to note that a sort of dual distinction is also widely practiced by the same scholars of natural sciences who use to distinguish in the catch the so-called *waste*, that is the species of no commercial value, and the *dirt*, that is what constitutes the garbage of a catch.

In Europe, mussels have also been historically perceived as an unhealthy food of minor importance and consumed by the poorer classes (de Roissy 1804-05; Molin 1865;⁸ Carazzi 1893; Cerruti 1924).

The negative connotation of mussels has led fishers to associate them with human and animal parasites from land and the use of the same name seem to have been rooted in human cultures for centuries. The fact that, in the Venetian lagoon, the mussels are commonly called *peòci*, lice, among inhabitants is curious and deserves our attention. During the Roman era we note that Pliny the Elder (23-79 CE), the author of the *Naturalis Historia*, speaks of the mussels using the Latin word *pediculus*. The origin of this name is not clear. It could be a linguistic 'fossil' or could be an example of a well-known mechanism studied by linguists who explain that the colloquial names for marine animals appear to be drawn mainly from the vast repertoire of terrestrial names, which is what people knew best (Cortelazzo 1963-64, 159-64; Leroi Gourhan 1977, 364).

The Venetian rehabilitation of mussels can be attributed to the fisher Alfredo Gilebbi from the Region Marche, who, in 1939, was the first to establish a lagoon mussel-farm.

During a trip, Gilebbi had the opportunity to observe the mussel industry of Mar Piccolo of Taranto in the South of Italy. From that, he decided to introduce this practice in the Venetian lagoon (Vianello 2018). Over the years, the method has been successfully changed and adapted to the characteristics of the lagoon environment. More than twenty years had passed since the first harvest, and the fishers from Pellestrina island, attracted by the possibility of making a profit, began to take an interest in farming and trading in mussels. Before the Gilebbi's rehabilitation of mussels, lagoon fishers compared them to weeds that grow in cultivated fields. So much was the hatred towards these black molluscs that they remember that the fishers usually crushed them with their fingers to kill them when they occasionally got entangled in the nets. They would then throw it back into the water so that it would never reproduce. The farming and trading in mussels were a success and during the 1970s the island became the epicentre of mussel production in Italy, becoming the scene of a great economic and socio-cultural transformation. For the first time fishers of the southern lagoon could live an economic well-being never seen before.

Over time, this innovative market created a real 'myth of foundation' among fishers, concerning the pioneering Gilebbi's work in Venetian mussel-farming (Vianello 2018). It is interesting that we find a similar foundation myth case on Burano Island in the north-

⁸ Molin, R. (1865). "Rapporto sulla coltivazione delle ostriche e dei mitili nella porzione media e inferiore della laguna di Venezia". *Gazzetta di Venezia*, 5 gennaio.

ern lagoon, linked to the introduction of the *moéche* following Second World War. *Moéche* is the Venetian name for a soft-shelled crab which is in the process of moulting its carapace and becoming edible (Bonesso 2000).⁹ Here innovation also brought great economic well-being.

The beliefs related to the danger of mussels continued to persist among the fishers of the lagoon for a long time after the emergence of mussel farming. Many of these are in fact the farmers who embarked on the new profitable job without finding the courage to taste a mussel until many years later. It is in this initial phase of mussel farming that special knowledge is developed to neutralise the potential poisonousness of these controversial molluscs. One of these systems was explained to me by the elderly Rino who notes:

When you eat *peòci*, you should never drink water. You have to drink some wine. Even if a person usually does not drink, he must still drink a glass of wine, he must drink half a glass of wine. Because with wine it's okay, but if you drink water the *peòci* can hurt you. Because of that, those who eat *peòci* have to have a glass of wine.¹⁰

This is a very interesting point, because we can find some suggestions to neutralize the mussels' toxicity in old French texts. De Roissy for example, at the beginning of the nineteenth century explained how to counteract the side effects associated with the ingestion of mussels (de Roissy 1804-05, 268-9). He explains their toxicity by the presence of a small crab that sometimes lives inside the valves and suggested eating this mollusc with vinegar and other acidic substances to neutralise the poisonous effects, just like the fisher Rino does.

The case of the domestication of lice-mussels reminds us that – as the comparative studies of cultural ecology stated¹¹ – the ways in which the different human groups take the resources from the ecozone in which they live show how the food needs are selective, that is mediated and determined by cultural influences (Schultz, Lavenda 2019, 218-36). To give an example, this means that we do not eat what is good but what we believe is good, or rather what we have

⁹ We also find another analogous process of relationship changing between society and marine resources in the Mont Saint-Michel Bay, in North France. Even here, a profitable mussel-farming industry was developed after the Second World War by a small group of mussel farmers from the Baie D'Aiguillon (Charente-Maritime Region) and, within a few years, the village of Vivier-sur-Mer became the leading producer of mussels in all of France (Delacotte, Roellinger, Cornu 2011), similar to the lagoon of Venice for the Italian territory.

¹⁰ Interview with Rino B., 24 October 2010.

¹¹ We recall that cultural ecology is characterised by the attempt to apply the principles of ecology to human beings, that is, the way in which the different living species relate to each other and to the physical environment.

learned to consider good. What is considered bad does not always correspond to the category of poisonous or unpleasant-tasting foods.¹²

Finally, from the mussels' perspective we know that they have their own agency and pursue clear biological aims even if without conscious thought or intention. Taking a cue from the actor network theory developed by Michel Callon and Bruno Latour (Callon 1986; Latour 2005) and from a recent article about the crab aquaculture in China by the scholar Halsey, we know that mussels share their biological goals with human mussel farmers and use human aquaculture strategies for their own ends (Halsey 2021). Mussel-farmers think they have found out how to control molluscs to ensure a reliable source of food. At the same time mussels – since they are no longer an invasive and venomous species to destroy held responsible for breaking the fishing-nets – enjoy these opportunities to expand their numbers. It is an entangled relationship history, where humans and animals engage in a “dance of agency”, as Halsey calls it, in which each one responds to the actions and interventions of the other.

5 Changes in Perception: Are Mussels a Pest, Animals to Care For, or ‘Stuff’ for the Market?

The mussel shell is not only a protective ‘crust’ for mussel farmers since a whole series of metaphors and similarities with the animal and plant world arise from it. These local experts recognise in it, similarly to the human being, a mouth, a lip, and even a beard. By mouth they mean the rounder side of the shell, the one that remains slightly open during immersion to allow the animal to feed. It is also the part that remains wide open when it dies. The mussel farmer Gianni-no – formerly a lagoon fisher like many of the first farmers – told me that “Once [early 1980s] I went home and told my wife ‘All my mussels have their mouths open!’. Farmers from the mainland distributed fertilizer on the countryside and my mussels died of heart disease”.¹³ As can be seen, not only the characteristics of mammals are attributed to the *lice*, but also the common human diseases and causes of death are attributed to them. For this reason, according to farmers, poisoning due to chemicals used in agriculture would cause the mussels to have a fatal heart attack. Taking up the words of this fisherman, the mussel is like a heart that contracts and relaxes to pump blood, and carries nourishment and oxygen.

Mussels live in water and this vital element, perceived as the equivalent to blood, is considered essential by the farmers. For this

¹² For a perspective on the issue, I suggest Harris 2006.

¹³ Interview with G.B., 19 June 2016.

reason, different water qualities affect the growth of mussels in different ways. Water is the vital element, but it can be harmful when its conditions are not ideal for the life of the species. The ideal water for the life of mussels is the *mestisa* water, a mixture of salty sea water and fresh water brought by rivers. Moreover, it must be clean and rich in nutrients as molluscs do not need any type of feed because they grow thanks to the plankton brought in by the tides. For the latter reason above all, mussels have been rehabilitated by transforming themselves from the indigestible and poisonous mollusc described by elderly fishers and by the texts of the past, into a synonymous of healthy and natural food for today's eaters.

Mussels are also equated to humans in their resistance to the hot summer temperatures of the lagoon. In such climatic conditions, mussels are taken by weakness like humans and lose the strength to cling to by their byssus. In this regard, a farmer explains to me that

with the hot weather the *stuff* becomes more tender and at a certain point it can no longer hold on, because the water heats up and they lose strength, like us who when hot are out of breath.¹⁴

In this case it is up to the mussel farmer's ability to look after them by taking mussels to deeper and cooler waters or to put them in nets that hold them back. Once again, the success of the breeding process depends on the knowledge possessed by the mussel farmer that allows to intervene to prevent the problem.

The similarities with the human body do not end here. The mouth attributed to mussels is a mouth with delicate lips to which close attention must be paid during the processing and cleaning phases so that it does not break. The byssus is instead called 'beard' due to its resemblance to a tuft of strong hair.¹⁵ Fisher Antonio explains:

the 'beard' is the support, it is the strength that the *lice* have. They have a beard that looks like horse hair because it's very hard and resistant.¹⁶

For some of the mussel farmers interviewed, the byssus is identified in the 'umbilical cord' of the mussel; if it is removed, the mussel loses its vital force until it dies, as Vincenzo explained in his testimony: "[i]f you remove the umbilical cord, the *stuff* doesn't last much long-

¹⁴ Interview with V.B., 23 September 2019.

¹⁵ With respect to the byssus, we find an example of lexical reference borrowed from the vegetable and agricultural world because it is also called 'root', *raise* in Venetian dialect.

¹⁶ Interview with Antonio S., 01 April 2013.

er, you have to eat it within twenty-four hours”.¹⁷ An interesting passage emerges here: the mussels kept in farms known as ‘nurseries’ (*vivai*), are perceived to be delicate children with an umbilical cord, to be cared for and protected during their growth. Referring to the younger specimens, those that are equated with rice grains for their size, the same farmer adds that “the *seed* is delicate, it’s like a small child, it has less resistance than adults”. Regarding the need to protect the young specimens, an elderly mussel farmer, in his nineties at the time of the interview in 2016, explained to me that:

[t]he mussel opens and closes its mouth to drink the water. There are many sea-breems, and they go in search of food and find the small [mussel] in the nurseries, which are less intelligent than the big ones, and they find them with their mouths open to eat, to suck water, and they eat them.¹⁸

It is necessary to open a brief exploration of the perception of the predator. In the interview excerpt reported, in addition to the attribution of a form of intelligence to the mussels, there is also an implicit attribution of intelligence to the sea-breems, which in order to prey need to be more intelligent than their prey. A perception that projects the same relationship that is established in the affirmation of a presumed superiority of intellect between the human hunter and his prey. It is not a physical dominance, a game of strength, but it is above all an intellectual dominance, made up of that cunning and intelligence that come from knowing the animal’s habits. Only in this way does it become possible to stay a step ahead and succeed in its capture.¹⁹

Returning to the fascinating subject of similarities, we have seen that the young specimen of mussel described by Rino is inexperienced and consequently defenceless. It opens and closes its mouth to suck the water, unaware of the dangers that surround it, similar to a defenceless baby sucking milk. The repertoire to which reference is made is, once again, the well-known one of the mammalian biological cycle: at the beginning of their life, young *lice* suck their vital element, they are defenceless and inexperienced, and then they become ‘ripe’ individuals once grown up.²⁰

¹⁷ Interview with V.B., 23 August 2015.

¹⁸ Interview with Rino B., 11 January 2016.

¹⁹ For further information on the topic, see Vianello 2004.

²⁰ The references to maturation used as a metaphor for humans and animals (but not only) is a factor that appears to be present in many societies. Among the Huave (Mexico), for example, it is also applied to the stars and to the moon that matures when it is full (Cardona 1993, 180-2).

This is the moment in which their perception changes radically, that is when the mussels reach the commercial size for sale. This is the growth phase in which the mussel farmers begin to refer to them with the term 'stuff'. This aspect of the mussel farmer's work highlights the relationship of man with nature. It highlights the specificity of the relationship of transformation, appropriation and use of a resource that is also something alive.

In the case of mussel farming, it is possible to make this process fall into the category that Maurice Godelier called *disjunction*: "[m]en isolate from nature the dead or living things that they use in their natural, brute state, or after a series of transformations" (Angioni 1984, 12). Among lagoon mussel farmers, there is a clear distinction between the young and live animal, which must receive all the necessary care, and the adult animal ready for sale and to be transformed into food for humans. It is in this passage that it seems to lose its belonging to the living world to transform itself into a generic 'stuff'. What I found during my research coincides with the hypothesis formulated by Gianfranco Bonesso during his original and interesting survey on the production of *moéche* in Burano. Bonesso affirms that

with the potential prey a symbolic process of distancing oneself is carried out, of transforming animal to object, *natural product* to a foodstuff, which also has confirmation on the symbolic-linguistic level. It is possible to consider it like a process of objectification, from living matter to inanimate matter; such is functional to determine the human position in the process of exploitation of resources and, perhaps, to remove an excessive proximity between man and other living beings that can be preyed upon. (Bonesso 2000, 23; italics in the original; transl. by the Author)

In both cases studied, the symbolic aspect passes from the perception of a delicate animality, to be cared for and protected like children, to its transformation into a product that already has a strong material and detachment connotation: it becomes a product, a commodity, an economic good. It is *stuff*.

6 Anthropomorphic Visions and Metaphorical Constructions

In his ethnoscience essay the author Cardona finds that the anthropomorphic vision unites many hunting and gathering societies. It is a vision that creates linguistically oriented models both on the body schema and on human behaviour (Cardona 1993, 112-13). Regarding the specifics of the symbolic and lexical references referring to the body that are found among fishers and mussel farmers, once again

it is possible to start comparisons with the data collected in Burano from Bonesso. Fishers say that the production of soft crabs is an activity imported to the island after Second World War - its learning therefore is recent, just as it occurred for mussel farming. Here as well as in Pellestrina, a rich series of similarities drawn from the human body and partly from the plant world have developed among the employees. According to Bonesso's interpretation, "the impossibility of translating 'sensations' into a speech, with words that make sense exactly, means that many metaphorical and metonymic constructions are offered to the researcher" (2000, 7). Agreeing with this interpretation, however, we point out that metaphorical constructions are not used exclusively as a means of communicating with the 'ignorant' researcher about the profession but are also commonly used in current communication among fishers when they find themselves lacking a specific professional vocabulary following the introduction of a new profession. Since the two new types of farming were introduced, accepted and developed by fishermen, it was necessary to increase the jargon of fishermen with new words; they are new words that were not created *ex novo* but that have been borrowed from the well-known world to be adapted to new needs.

We have already encountered some practical examples of this process concerning mussels, and all the examples are borrowed from the better-known mainland world. The examples given allow us to hypothesise that, when an innovation occurs suddenly within a local context, it is rarely possible to compensate for the need for new names with already existing jargon. As a result, people are subconsciously inspired by words borrowed from other well-known vocabularies and other metaphorically evoked worlds.

7 The Mussels' Reproduction: A Mysterious Matter

An interesting aspect of local knowledge on mussels concerns the methods of their reproduction.

Based on local popular knowledge, mussels would be differentiated between males and females based on the colour of the animal: the red-orange colour would indicate the males, while the white, the females. Due to the recent introduction of mussel farming in the lagoon, the process of affirming and consolidating new ecological knowledge has not yet concluded. Therefore, we do not always encounter univocal interpretations among fishers and mussel farmers. We sometimes find, however, conflicting opinions, as in the case of the explanations concerning the diversity of mussels' colour. One of the first fishers from the southern lagoon who chose to become a mussel farmer explains that the different colour depends on the quality of the filtered water. He explains that when the water is pure, this characteristic

also affects the colour of the mussel, which cleans itself by filtering and becomes white, a colour that is culturally recognised as a symbol of purity, cleanliness, and healthiness: “It is the type of water that filters. When the water is purer, the ‘lice’ eat the same, but they eat stuff that is healthier”. In this case there is no gender correlation.²¹

For other informants, the different colour of the animal only affects their flavour. Molluscs that are not too dark, those indicated as between orange and yellow, would be the tastiest, but for some, the white ones are the best of all, those that, as we have already seen, filter the cleanest water.

Beyond the colour of the single mollusc, males and females reproduce and give life to the young specimens. When the period of reproduction comes, fishers often say that the fish have ‘milk’, which is nothing more than the emission of sexual products (that are dispersed in the water where fertilisation takes place). The fisher Antonio explains that mussels:

give up spores, practically there are times when it is said that the *peòcio* has the milk. They release these spores and thus give birth to other *peòci*. The sowing is born. They have periods that have milk.

The presence of the so-called ‘milk’ inside the shell during the reproductive period – once again we encounter a reference to the world of mammals – is not the prerogative of mussels alone. Fishers recognise that this characteristic also extends to other molluscs with shells such as clams, sea urchins or razor clams. The seasonality of the production of ‘milk’ is well known and expressed by the popular saying “when it is very hot and when it is very cold the mussels have the milk”. During these periods, the molluscs are judged by fishers to be difficult to digest and have a less pleasant taste, even if they admit that there are many people who eat them anyway.²²

The reproduction of mussels is described as a mysterious and not clearly predictable process. Someone ventures that the secret would perhaps lie in the temperature of the water, but it is not sure. A young man from Chioggia told me: “*Seeds* are something I don’t understand, and even older fishers don’t understand. Two years ago, the mussels

²¹ According to biologists, the colour is influenced by the amount of light to which they are exposed, which in the case of mussels often corresponds to the depth in which they live. For others, however, the orange colour is given by the presence of eggs.

²² As biologists explain, ‘milk’ is nothing more than the sexual product of mussels, the gametes. In fact, it is during this period that they have the most meat and are particularly tasty. The presence of ‘milk’ provides about 60-70% of their taste, the remaining 30-40% depends on the diet, that is, on the quality of the water in which it is raised (from an interview with Stefano Gilebbi, biologist and mussel farmer).

were full of seeds to the point that they couldn't even be processed. The following year, no *seeds* were found, and the *seeds* had to be bought in other seaside locations".²³ When the conditions for reproduction are particularly favourable, an excessive amount of *seeds* develop and settle around the more grown individuals. This way, the already grown mussels find themselves in an internal position which is unfavourable because there is little nourishment. However, when *seeds* are not produced, the mussel farmers are forced to buy them in other locations, spending large amounts, if they wish to start production for the following year.²⁴ Almost a century after the creation of Alfredo Gilebbi's first breeding farm in the lagoon, his nephew Stefano, a mussel farmer himself, comments on the reproductive process: "the mussels do what they want, you really don't understand!".²⁵ The lack of in-depth knowledge about mussels and their reproduction partly brings farmers closer to fishers in terms of uncertainty which in this case seems to remain a constant feature of the trades that exploit the resources of the aquatic environment.

8 Conclusion

We have seen that in Venetian lagoon, we find a late appreciation of mussel resources and a late adoption of the technical innovations to exploit them. A novel use of this local resource was created in the twentieth century. Following this process, mussels change their status as food. They turn from poisonous to refined and natural food.

The new job, started by the pioneer Alfredo Gilebbi, is not a simply innovative business model, a source of well-being for the poor fishers. The result is a deep cultural revolution among fishers. In just a few decades the perception on mussels has changed: they are not a pest to be eradicated anymore. *Lice* turn themselves into delicate animals that need attention and care like babies. At the same time, a new and rich professional language is developed to support the new profession. It is a functional language for farming that is borrowed from the well-known terrestrial dimension, and that uses many anthropomorphisms and metaphors.

Therefore, these elements are not yet sufficient to start a profitable farming. Still missing the most important aspects, what allows the fishers to manage the growth of mussels: new knowledge and new skills. The fishers' knowledge is largely based on personal experimentation and direct observation of the different phases of work together

²³ Interview with Riccardo B., 23 November 2018.

²⁴ Interview with Maurizio P., 15 April 2019.

²⁵ Interview with Stefano G., 30 May 2017.

with the daily attendance of the places. Otherwise, the information was passed on from the older generations to the younger ones. It is the local ecological knowledge and technical skills that make a fisher capable and competitive. In the case of the nascent mussel farming, to meet the basic needs of the trade, the transmission of what was first-ly observed begins to spread horizontally among fishers of the same generation. Since the boom in mussel farming arose between the 1960s and 1970s of the last century, the start of experimentation and observation by fishers is also recent. As I have tried to demonstrate, from this derives a variegated imaginary, sometimes contradictory and other times imaginative but no less interesting for what it communicates on the socio-cultural dimension of mussel farming and on the profound transformations that have affected the world of fishing.

By reconstructing the development of mussel farming and its subsequent rise to fame, it was possible to have a deeper understanding of how new knowledge is obtained and learnt. Among fishers, the learning of lagoon knowledge appears to also take place thanks to the interactions they build with the other human and non-human components that live here. The Venetian lagoon is confirmed as a concrete example of the relationship of mutualism between humans and environment hypothesised by Ingold and defined by him as *inter-agentivity*. As we have tried to demonstrate, the perception and relationships of mutualism are not something immutable and, under certain conditions, it can totally change over time, as in the case of mussels. In particular, the mutual relationship that is created between mussel farmers and mussels during the breeding process brings undeniable advantages to both species. From their relationship the mussels derive a biological advantage linked to growth and reproduction processes protected by humans that allow the molluscs to spread widely (so much so that many fishers define mussels as an invasive species due to the large number of mussel farms). For humans the advantage is economic and obtaining an easy food source. According to Ingold's studies on reindeer breeding, humans and animals share multiple goals and values, but both consider the advantage for the individual and the whole species (Ingold 2014, 20).

The phenomenon of mussel farming in the lagoon was not an isolated case. We mentioned the introduction of *moèche* breeding in Burano, but in more recent years other examples of innovations have also been presented locally. Suffice to think of the widespread harvesting of *vongole filippine* (*Tapes semidecussatus o philippinarum*, Adam, Reeve 1852), clams, in the 1980s (Pellizzato 2005). Thanks to the sudden great demand of the markets and the high earnings, almost all fishers chose to devote themselves to a previously unprofitable activity carried out by the poorest and oldest lagoon fishermen during the winter months. Today we can also draw attention to the appearance on our shores, and timidly in the fish markets, of 'blue

crabs'. All examples that confirm once more that the so-called 'tradition' is not something immutable, but something that re-proposes itself according to the same patterns and methods. I believe it is possible to affirm that every species, perceived as alien or local, if the favourable conditions arise, assumes the potential to transform itself in the eyes of fishers into a future technical and cultural innovation, in turn developing new professional jargons, perceptions, mutualisms, and imaginaries.

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