

AARHUS  
UNIVERSITY  
RESEARCH ON THE  
ANTHROPOCENE

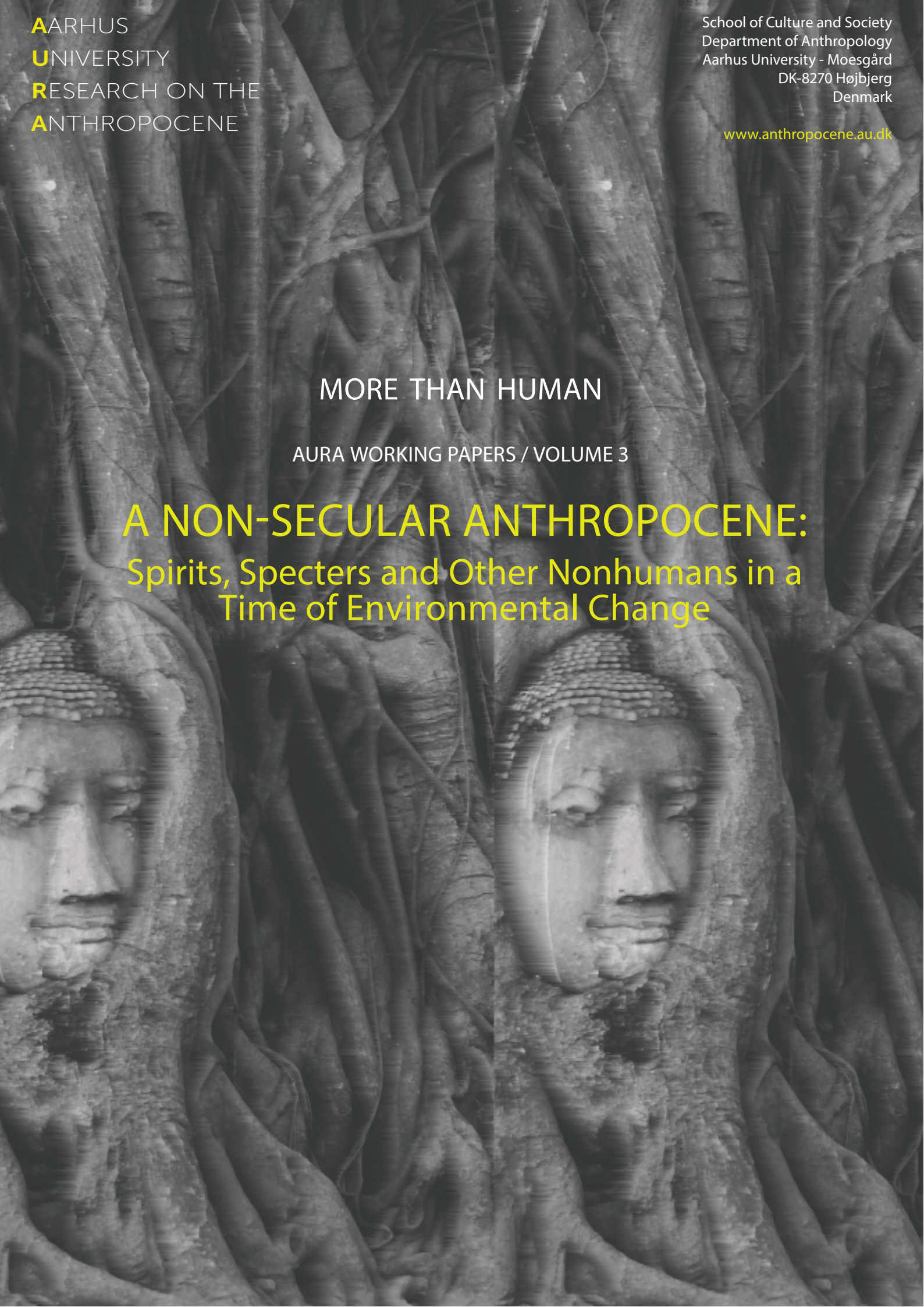
School of Culture and Society  
Department of Anthropology  
Aarhus University - Moesgård  
DK-8270 Højbjerg  
Denmark

[www.anthropocene.au.dk](http://www.anthropocene.au.dk)

MORE THAN HUMAN

AURA WORKING PAPERS / VOLUME 3

**A NON-SECULAR ANTHROPOCENE:**  
Spirits, Specters and Other Nonhumans in a  
Time of Environmental Change



## AURA (Aarhus University Research on the Anthropocene)

Applying insights and methods from anthropology, biology and philosophy, AURA aims to open up a novel and truly trans-disciplinary field of research into the Anthropocene. It focuses on the 'co-species landscapes' that humans and other species come to co-inhabit in the Anthropocene and suggests that a descriptive and trans-disciplinary approach is needed to understand the kinds of lives that are made and the futures that are possible in the ruined, re-wilded, and unintended landscapes of the current moment.

AURA is part of the Niels Bohr professorship (between 2013 and 2018) for Anna Tsing. The financial support from the Danish National Research Foundation for the Niels Bohr professorship is gratefully acknowledged.

### Citation:

*A Non-secular Anthropocene: Spirits, Specters and Other Nonhumans in a Time of Environmental Change.* More-than-Human. AURA Working Papers Volume 3, 2018. N. Bubandt, ed.  
<http://anthropocene.au.dk/working-papers-series/>

ISSN 2596-7282

# MORE THAN HUMAN

## AURA WORKING PAPERS / VOLUME 3

### A Non-secular Anthropocene: Spirits, Specters and Other Nonhumans in a Time of Environmental Change.

#### TABLE OF CONTENTS

<b>NILS BUBANDT</b>	2
Anthropocene Uncanny: Nonsecular Approaches to Environmental Change	
<b>BRONISLAW SZERSZYNSKI</b>	19
Planetary Spirit	
<b>ASTRID OBERBORBECK ANDERSEN</b>	31
Of Volcanoes, Saints, Trash, and Frogs: Eschatological Talks and Plural Ecologies in Arequipa, Peru	
<b>JESSICA MADISON</b>	46
Golden Mountain, Iron Heap: A Poetic Ethnography of Extraction in Eastern Mongolia	
<b>VICTOR COVA</b>	53
Nonsecular Regrets for Infrastructure in the Ecuadorean Amazon	
<b>JOHN MORAN</b>	60
Feeling Life Force: Ecological Spirituality Among Settler Environmentalists in Florida	
<b>SAMANTHA HURN</b>	76
From the Horse's Mouth? Hearing Nonhuman Voices in the Anthropocene	
<b>PIERRE DU PLESSIS</b>	97
Tingling Armpits and the Man Who Hugs Lions: Dangerous Ghosts of Sameness and Different Differences	
<b>MAYANTHI L. FERNANDO</b>	107
Flora, Fauna . . . and the Fabulous? Supernatural Hauntings in a NatureCulture World	

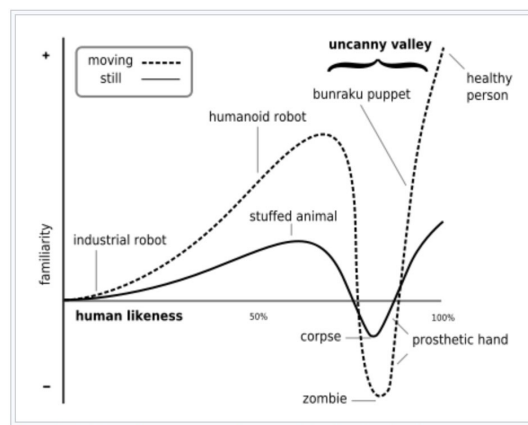
## NILS BUBANDT

## ANTHROPOCENE UNCANNY:

## Nonsecular Approaches to Environmental Change

## THE UNCANNY VALLEYS OF THE ANTHROPOCENE

Psychologist Sigmund Freud described phenomena that are familiar and foreign at the same time as uncanny. *Unheimlich* – the German word for uncanny – literally means “unhomely” and captures the paradoxical mix of the homely and the strange that goes into the feeling of the uncanny (Freud 2013 [1919]). Ghosts, gods, spirits, and specters are classical icons of the uncanny. These entities are uncanny because they disturb the proper and familiar separation of things: the separation between the living and the dead, between the imaginary and the real, between the virtual and the actual. Ghosts, gods, specters and spirits are invisible apparitions, a paradoxical NO THING, a “between that is tainted with strangeness” (Cixous 1976: 543). But in 1970, the Japanese robotics engineer, Masahiro Mori, suggested that robots, too, become uncanny when they increasingly approach but still fail to achieve full human likeness. A prosthetic hand that has the fleshy look but not the proper fleshy feel of a human hand is, Mori suggested, as uncanny as a ghost. Mori called the experiential space of such phenomena “the uncanny valley”: the space where the function of increased likeness intersects with the function of decreased familiarity (Mori 2012 [1970]: 98-100).



Masahi Mori's Uncanny Valley (photo credit: Wikipedia)

In Mori's chart of the uncanny valley, corpses and zombies share quarters with only one human invention: the prosthetic hand. But since 1970, it is fair to say, Mori's uncanny valley has become radically crowded with new beings far beyond robotics. Advances in genetic technology and bioengineering have added cloned animals, gene-modified crops and a host of other familiar-yet-strange denizens to the



uncanny valleys of our time. The overpopulation of these uncanny valleys has also arguably grown exponentially after anthropogenic environmental disturbance has begun denaturalizing nature itself: jelly fish blooms, freak storms, and factory chicken are examples of this kind of environmental uncanniness. What are we, for instance, to make of the fact that the total biomass of the 20 billion chickens in the world's industrial mega-farms is three times that of all wild birds combined (Bar-On et al. 2018)? A chicken is a very familiar bird for sure. But when the chicken is well on the way to becoming the signature, and one day soon perhaps the only, bird in the world, its very familiarity takes on a distinctly uncanny hue. Ecological uncanniness, one might call this.

### SCIENCE AND THE REAL: NATURAL-SUPERNATURAL-UNNATURAL

The eight papers in this collection – the third volume of the *More-than-Human* working paper series published by AURA – explore the uncanny valleys of the Anthropocene. They do so by asking whether we can align the rising strangeness of the nonhumans that the natural sciences study with the study of uncanny more-than-humans worlds – of ghosts, gods, spirits, specters, and other magical beings – that anthropologists conventionally study. “More-than-human” points, after all, both to the realm of the natural and to that of the supernatural. Might their meeting be understood through the lens of the unnatural, the uncanny?

If the uncanny represents a “crisis of the natural” (Royle 2003: 1), the Anthropocene is a truly an uncanny time, a time when the proper separation between things – between culture and nature, subject and object, human and nonhuman, life and non-life – is collapsing. The concept “Anthropocene” was born when geologists and climate chemists had to acknowledge that their natural objects of study was infused by human agency, but in ways that produced their own forms of more-than-human unpredictability. In the J-curves of the Great Acceleration (Steffen et al. 2015) an uncanny valley opened up when scientists had to acknowledge that the familiar promise of endless growth had led to environmental decline and climatic chaos. Climate change is the perhaps most evident example of a human-caused but also uncannily run-away process. Consider, for instance, the uncanny rift between familiar experiences of weather and the statistics of climate. Many people across an ordinarily sun-starved northern Europe welcomed the exceptionally warm May of 2018 as an early start to a great summer. But by the end of the month, May turned out to also be the hottest month of May on record in the northern parts of Europe and the contiguous US (NOAA 6.6.2018). And the heat just continued. The hottest temperature ever in Africa was recorded in Algeria in the summer of 2018, and temperature records were broken in Taiwan, Central Asia, Europe, Canada, and the Western US. What was initially experienced as a pleasantly warm weather streak by heat-starving northern Europeans was by July

revealed as the hottest El Niña year on record. The hemispheric scale of the heat meant that it began, eerily, to point to more than itself. In early July, a group of leading climate scientists hypothesized that positive feedback loops between changing climate, ocean currents, and other Earth systems could cause cascading effects that would catapult Earth into a “hothouse” state well before current predictions. This, they suggested, would have massive effects on global environment, societies and economies (Steffen et al. 2018). Hoping against all hope that they were wrong, one of the authors said that it was urgent to pose this possibility in the context of the unexpected nature of the ongoing summer heatwave of 2018. It was, in fact, “one of the most urgent existential questions in science” (Watts 2018b). In the course of a few months in 2018, weather had become uncanny, at once familiar and strange, urgent and unknowable. This meant something: namely a shift in how we will be able to experience weather in the future. After 2018, it has arguably become impossible to enjoy a sunny day without a certain *frisson* – an emotional shiver that is at once existential and epistemological. For while it is “difficult”, as researchers from the World Meteorological Organization put it, to ascribe any individual hot weather streak to climate change, when taken together, all the hot days across the northern hemisphere in 2018 became strong indications of global warming (Watts 2018a). On its own, each freak event is nothing. Together however, the freak events point to a new freaky climate reality, made all the more uncanny by being both perceptible and imperceptible (Hulme 2009). Climate, like ghosts and witches, teeters on the border between being-there and not-being-there (Bubandt 2014). In a time of global warming, weather is no longer innocent and given: from now on, weather is by necessity always-already haunted by the specter of anthropogenic climate change.

But weather is not alone in having become eerie in the Anthropocene. Nature has, too. What may once have been “natural” (but then who knows?) increasingly evades experience and language because “nature” itself has lost its proper place. Natural events have increasingly become “unnatural” by default, uncannily monstrous rather than homey and seemingly maternal (Stengers 2015). Take, the 2011 tsunami and nuclear power disaster in Japan, a disaster both natural and thoroughly unnatural (Bestor 2013). As a result, “nature” takes on the uncanny characteristics of those forms of the supernatural that never had a proper place of their own in the modern West: spirits, monsters, ghosts (Bubandt and van Beek 2011). This uncanny monstrosity gels poorly with hegemonic accounts of the Anthropocene where humans are said to be forceful agents acting upon a passive world. But far from being an epoch when humans have become “a force of nature” (Steffen et al. 2007), the Anthropocene names a time when human industry has conjured into existence nonhuman life forces that the modern prophets of industry – those who announced humans to be the only true agents in the world – had declared to be dead. The

Anthropocene is a time when ghostly forces come to life in ways that are tainted through and through with strangeness. Take, for instance, the unpredictable agency of anthropogenic earthquakes in the fracked landscapes of Oklahoma (Hand 2014), the explosive but still contested methane flammability of a thawing Siberian tundra (The Siberian Times 2017), or the rapid but poorly understood decline of flying insects from the landscapes across Europe in the last 25 years (Carrington 2017). Or, take the global spread of the chytrid fungus by that favored medical animal, the African clawed frog, which is exacerbating the extinction crisis of the world's amphibians. Or take the vanishing of the bees, or the collapse of fish stocks following the uncontrolled blooms of the planktonic ctenophore *Mnemiopsis* in the Black Sea and other central Asian bodies of water (Measey et al. 2012; Shiganova and Bulgakova 2000): all ghostly events marked by eerie disappearance or proliferation; all events that straggle the borders between life and death.

## BIOLOGICAL HAUNTINGS

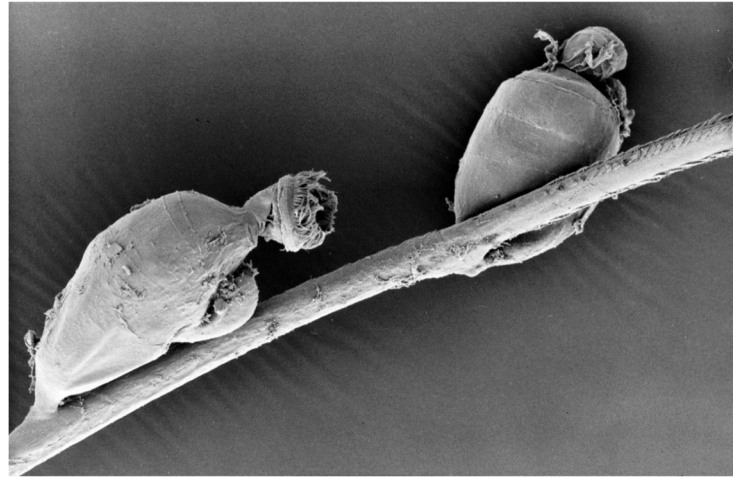
In the midst of such disastrous versions of ghostliness out there in the world, ghosts well up in enigmatic forms within science labs and science literature as well. Biology, for instance, is haunted by new insights that challenge conventional ideas about its research object: life. Take tardigrades, a phylum of over 1200 species of micro-animals found on both land and in water. Some land-based tardigrades have an ability called cryptobiosis that allows them to lay dormant for decades, entirely desiccated, only to come back to life, when conditions change. Other species of tardigrades are hardy enough to survive almost any imaginable astronomical (or human-caused) disaster. They can, for instance, withstand radiation energy blasts that would be enough to evaporate the planet's oceans (Temming 2017). The indestructibility of tardigrades, beings also known as "water bears", has made them prime candidates for optomechanical experiments that seek to establish where the mind-bending laws of quantum mechanics end and the physical laws of "classical reality" begin. Dutch scientists plan to place a tardigrade on a millimeter-size silicon nitride membrane. Using a laser beam, the researchers hope to bring the membrane into an oscillation pattern that is so fast that it, and the tardigrade on it, will be pushed into a quantum superposition – a condition of being where the tardigrade would be nowhere and everywhere on the oscillation curve at the same time (Folger 2018). The tardigrade in a quantum superposition would cease to "be there" in any classical physical or common-sensical way. It would be the first biological entity to be scientifically induced into a ghostly state of pure potentiality. "Any sufficiently advanced technology is indistinguishable from magic," as the so-called third law of science-fiction writer, Arthur C. Clarke, has it (1962: 21). The possibility of a scientifically produced ghost-tardigrade begs the question: what are we, in turn, to make of the reality of magic in the face of such technology?



Tardigrade (photo credit: [io9.gizmodo.com](http://io9.gizmodo.com) and Sciencephotolibrary)

If the charismatic-looking tardigrades are the ghosts of biology – uncanny specters at the beginning and the end of the world as we know it – then Symbions are its category-breaking queer spirits. Symbions are microscopic symbiotic animals that live on the mouthparts of some Atlantic shellfish, where they feed on food left-overs. Legless and with a nervous system that is entirely unique in the biological world, Symbions belong to their own phylum called Cycliophora, named by AURA collaborator and biologist, Peter Funch, along with colleague Reinhardt Kristensen in 1995. Symbions have a strange and complex reproduction system: they reproduce sexually as well as asexually. Every adult Symbion has a female inside its body. This female is fertilized, inside the adult body, by males that have been produced and grown inside a different larval form also produced by the adult. The fertilized female leaves the adult body and settles elsewhere on the lobster mouth part, where – inside its body – a new larvae destined to become a new adult, is produced. A Pandora’s box of beings within beings, multiply sexed and cryptically reproducing, Symbions have what some have called “the most bizarre life story on Earth” (Marshall 2010). The evolutionary origin and phylogenetic position of the Symbion are still debated, failing as they do to properly fit the morphological and ontogenetic criteria of animal life.





Symbions (photo credit: Peter Funch)

## TOWARDS A NONSECULAR ANALYTIC OF THE ANTHROPOCENE

The papers of this volume of the *More-than-Human* working paper series were presented at a conference entitled “A Nonsecular Anthropocene: Spirits, Specters and Other Nonhumans in a Time of Environmental Change”, held in June 2017 in Copenhagen. Hosted by AURA (Aarhus University Research on the Anthropocene), a Niels Bohr Research project around Anna Tsing funded by the Danish Research Council, the conference took place – appropriately, so we thought – in *Koncertkirken*, a former Protestant Church turned concert venue. The conference grew out of a – still unfinished – conversation that we have been having in AURA for some time about a lack in much scholarship about the Anthropocene. There is, so it seems to us, an absence of sustained, empirical exploration of the ephemeral, spiritual, magical qualities of the nonhuman agency that has come to take center stage in the Anthropocene. We mean empirical in a critical not a naïvely empiricist sense. We also think of being empirical in a non-normative sense, an empirical attention to the world that seeks to study the ephemeral in ways that move beyond the sterile choice between secular or religious sympathies. The lack of a critical, non-normative and empirical approach to the ephemeral and uncommon-sensical in Anthropocene scholarship is all the more jarring given what one might call the latent promise of the Anthropocene debate: namely, its claim that in Anthropocene scholarship the “common-sensical” divide between the human and the nonhuman, the living and the non-living is no longer operable. In the wake of this claim, studies of the nonhuman remain strikingly and one-dimensionally secular. Inspired by the epistemological instability between the human and the nonhuman, between life and non-life, that the Anthropocene portends, we ask: Does not the nonhuman entail more than flora, fauna, and geology? How do we include spirits, specters and ghosts in the study of the nonhuman or more-than-human? Might the break-down of the human-nonhuman divide, which destabilizes the distinction between humans and

nature and the distinction between humans and technology, not also destabilize the distinction between the material and the spiritual, the natural and the supernatural, the skeptical and the superstitious? Might the Anthropocene, in other words, not also be a nonsecular Anthropocene?

The concept “Anthropocene” is the buzzword, the *mot de jour*, of the current moment. Like other buzzwords before it which sought to describe something essential about “the current moment” – modernity, globalization, capitalism, democracy – the word Anthropocene means different things to different people (Swanson et al. 2015; see also Howe and Pandian 2016). The conventional Anthropocene story, the story of the Anthropocene that most often makes it into the public news, is however an “all-to-human” story: “we humans”, so this story goes, have through our carbon-driven industry caused massive changes to the ecological and bio-chemical systems of the globe (Crutzen 2002: 23). This all-too-human story is one of tragic irony, a story of harvesting the sour grapes of our own progress. It is a *Zivilisationskritik* as told through the human destruction of the fragile environment around us. It is an apt and useful story, but also a very specific story: one that insists, yet again, on putting Man (capital M) and Western Man (capital W and capital M) at its center. It is a story which has one of two endings: either apocalypse of one kind or another or salvation through some technological fix (embodied in dreams of machines to sequester carbon, of gene banks to store the DNA of extinct species, or of an exodus to Mars) (Haraway 2016).

In AURA, we want to tell other and more-Earthbound stories of the Anthropocene that challenge this anthropocentric and euro-centric story. We want to tell multi-species stories about the more-than-human socialities that we humans cultivate, in many different ways, with the bacteria, the fungi, the protists, the animals and the plants around us. This interest in more-than-human-socialities have drawn us into collaboration with biologists, through whom we have come to learn hugely interesting stories about the magic of symbiotic evolution, about the alien and space-defying life-cycles of the tardigrade, and about the uncanny reproduction of the Symbion. And it is here that the conversation about “lack” and “latent promise” comes in: for what kind of conversation might be possible, we wonder, between these biological insights into the magic, the alien, the uncanniness of the lives of animals, plants and fungi on the one hand, and the anthropological engagement with the magic, the alien and the uncanny in fieldwork, on the other? Might we learn to take both kinds of magic – the magic of the natural world and the magic of what is erroneously called “the supernatural world” – equally seriously? To think critically and curiously across the realities opened up by each of them? To think of magical ecologies as both biological AND full of the unknown, the magical, the unusual? To engage empirically with the unnatural in order to better understand a natural world gone awry (Bubandt 2017)? More-than-human sociality might in this

light, for anthropologists, be more than a foray into new terrains of biology, technology, and geology but also a rediscovery of some old terrain: the anthropological study of that which our secular language does not allow us to say without secretly snickering: the spiritual, the cosmological, the magical, the ancestral. Secularist reason, ironically, obliges us to dismiss and distance ourselves from these dimensions in spite of the fact that the magic, the alien, the spiritual is found not only in exotic settings far away but may also be found in our global financial markets, in “natural” disasters, in voting booths, and on an optomechanical membrane. Far more than that, magic – so we suggest – is woven into the very fabric of co-species relations of a ruined world.

So could not, and should not, Anthropocene scholarship also be an engagement with and a critique of the secular language and secular common-sense that shore it up? For this language and the common-sense view of the world that it affords prevent us from properly – that is, critical and empirically – exploring the uncommon and uncanny forms of agency and enchantment that are called into being in the Anthropocene (Szerszynski 2017; Buck 2015; Latour 2014). The idea of a nonsecular Anthropocene, for us, does not point to a place, a domain outside of the secular. Rather a nonsecular Anthropocene seeks to name an analytical perspective, a different kind of language and a different way of seeing. In fashioning the vocabularies and spectacles for this perspective, we are helped a great deal by existing research. Elisabeth Povinelli’s study of geo-ontologies seeks to probe the distinction between animate and inanimate the structures modern, neo-liberal and secular power – a distinction that is fundamentally challenged on its own terms in a time when both rivers and companies have become legal persons (Povinelli 2016). Marisol de la Cadena’s notion of cosmo-politics and her argument that the Anthropocene is haunted by the Anthro-po-unseen also points to what we call a nonsecular Anthropocene (de la Cadena 2015), as does Timothy Morton’s call to magical realism as a necessary perspective for the study of hyper-objects such as global warming and species extinction (Morton 2013).

The intervention of the following eight papers in *A Nonsecular Anthropocene* take as their starting point landscape ecology. And like the recent publication *Arts of Living on a Damaged Planet* (Tsing et al. 2017), they ask what kinds of ghosts and monsters, ancestors and gods inhabit the ruined landscapes of the Anthropocene. How, in other words, might the study of biological landscapes be brought into a conversation with the study of the uncanny valleys of the Anthropocene? By bringing the empirical study of landscape ecology into conversation with the critical study of the multiple ontologies of the uncanny valleys of the new reality named the Anthropocene we hope to build a nonsecular approach to the more-than-human ecologies of contemporary environmental crisis. Such an approach might, we propose, begin with an empirical study of the eco-theologies of co-species life to then

ask questions about the links between political ecology and political theology. If political ecology seeks to describe the relationship between politics and the environment, and political theology that between politics and the realm of gods and spirits, the study of an Anthropocene uncanny would seek to explore what happens in the links between these. For how do the politics of nature and the politics of religion relate in the Anthropocene? Bruno Latour began an answer to this question in his 2013 Gifford lectures on Gaia which he subtitled *Six Lectures on the political theology of nature* (2013; see also Latour 2017). In these lectures, he started by dismissing “religion” and “nature” as useful categories in the Anthropocene, partly because, as he put it, “they share too many attributes”, and partly because they fail to adequately name “the agencies that populate the Earth”: those humans and nonhumans that are called into being and into action by the changing world they inhabit together. So, the Anthropocene seems to be a critical moment in which to re-inquire into how we might best study those beings that used to be contained either in “nature” or in “religion”. Beings that used to be neatly separated into each their proper domain – ghosts, spirits, gods and specters within the domain of “belief” and “religion” and tardigrades, carbon particles, methanogenic bacteria within the domain of “fact” and “nature” – now roam the same uncanny valleys of the Anthropocene. The contributions to *A Nonsecular Anthropocene* make a common call to study these uncommon beings and their reality effects on all of us.

There is no easy way to study the afterlives of nature and religion in these uncanny valleys, but they are too omnipresent and important to be ignored. When US President Donald Trump in 2017 announced the withdrawal of the US from the Paris Agreement on climate change, following pre-election tweets that he believed global warming to be a Chinese hoax perpetrated to financially trick America (White House Briefing 2017; Pierre-Louis 2017), he was roundly criticized for withdrawing from the global accounting system for a nation-based reduction to carbon-emission (itself not an ideal system) – not only by other political leaders, but also by Pope Francis. In his 2015 Encyclical letter, Pope Francis had already declared the climate to be a common good and the earth the “common home” of humankind. Following earlier Papal calls for a “global ecological conversion”, Pope Francis announced the need for a dialogue between science and religion to address an ecological crisis that was caused by humans and through which “humanity has disappointed God” (Pope Francis 2015: 44). The entanglements of belief and skepticism, of the homely and the uncanny, are thick and spectacularly ambiguous in this melting pot of political doubt, scientific truth and religious morality. In an Anthropocene twist of modernity, belief and skepticism have themselves become unrecognizable, uncanny: doubt today aligns easily with populism and corporate-financed conspiracy theory (Oreskes and Conway 2010), while science today finds new alliances with theology. If it is true that nature has no proper place in the Anthropocene, it is equally true that

“politics”, “religion”, and “science” longer look the same either. A nonsecular approach to the Anthropocene begins by taking this twist seriously by studying how – in contrast to conventional accounts of secular modernity – environmental and climatic crisis appears to give center stage to new alignments of truth and belief, politics and doubt in multiple ways and how in the wake of these realignments the possibility of gods and ghosts irrupts from within the politics and sciences that not so long ago insisted on banishing ghosts and gods to a putative elsewhere – to the exotic other, to the naïve and uneducated or to our own pre-Enlightenment ancestors. This banishment from the realm of the real is no longer so easy to maintain. Unexpectedly, and unwantedly, ghosts and monsters have now come to occupy the place of the real, of the deadly serious, in novel and unexpected ways. Nature-as-we-knew-it may be have ceased to be, but what has taken its place? What is the reality of nature after its death? Nature as ghost? As imagination? As calculation? As conspiracy? As hyper-object? As monster?

#### ETHNOGRAPHIES FROM THE UNCANNY VALLEYS OF OUR TIME

The eight contributions to *A Nonsecular Anthropocene* venture into the uncanny valleys of the Anthropocene to explore these questions.

**Bronislaw Szerszynski’s** article is an art-science experiment in the physics of gravitational becoming. When planets take form, where do spirits go, Szerszynski asks. Cosmology refers in anthropology to the indigenous myths that are concerned with the beginning of the world. In science, cosmology refers to the forefront of theoretical astrophysics, the most cerebral of all natural sciences, where Nobel Prize-winning hypotheses meet technologically advanced underground super-colliders. Szerszynski provocatively invites us to think across this divide between “their” and “our” cosmology, across the myths of spirits and the science of gravity, as a way to explore the turbulence of the Anthropocene. To understand what settles in the uncanny valleys of our time, Szerszynski suggests, we need to cultivate a “speculative planetology”, a style of thinking that is willing to draw on both vernacular inquiries into matter and modern physics. For the two are not as far apart as they used to appear in our recent modern past.

This is evident in southern Peru, for instance, where the peaks of mountains grow increasingly dark as their glaciers diminish. The dark peaks are visual testimony to climate change and icons of a world gone awry to scientists and locals alike. **Astrid Oberborbeck Andersen’s** paper proposes a “plural ecological” approach to these changes, an approach that seeks to understand climate science and local reflections about climate change at the same plane of reality. The volcanoes that line the horizon in the city of Arequipa are, so Oberborbeck Andersen suggests,



simultaneously geological formations, jealous lovers, and Catholic patron saints. Instead of an approach that seeks to separate these agencies into secular or real on the one hand and religious or superstitious on the other hand, Oberborbeck Andersen insists on a “naïve realist” approach that seeks the simultaneous reality of all of these forces in a Peruvian pluriverse. Locals of Arequipa lament the disappearance of the frogs from their landscape, acknowledging that the vanishing of the frogs is related to a changing climate and a global amphibian extinction crisis, at the same time as they speculate that the frogs may have retreated to a secret place from which they plan to take back their world. Oberborbeck Andersen advocates for a nonsecular plural ecology to understand the multiple agency of frogs, mountains and other entities at the end of the world in Peru.

Amongst the nomads on the Mongolian grasslands, poetry is not only a way of describing landscapes but also a means of producing them through appeals to the world of spirits, gods, and ghosts. Exploring this magical ecology, **Jessica Madison’s** article analyzes how word-making and world-making are entangled for the people in Dariganga. In a landscape broken by decades of socialist ruination as well as by the numerous mining operations that have bloomed after the Mongolian mining boom in 2010, Madison argues that poetry, *ovoo* stone heaps, and musical performances are marshalled to hold the landscape together, to sing the landscape into flatness in an increasingly vertical world. And yet this is not your classical instance of traditional resistance to modernity, Madison insists. For modernity in Mongolia is associated with the socialist past. In a very real sense, modernity has already come and gone. The current mining boom is also ambiguous. It benefits many Mongolians even as it destroys their world: mining is both life- and death-giving. Under these circumstances where neither past, present, nor future can be taken for granted, poetry and the ritual *ovoo* stone heaps that seek to bring the world together are highly ambivalent practices. Madison calls them “strategic equivocations”: experimental spiritual designs to materialize a more-than-material landscape in a changing, uncertain world.

**Victor Cova’s** paper is also concerned with the problem of how to capture the multiple agencies at stake in events without an *a priori* secular definition of what “real agency” is. Cova’s paper describes the partially failed construction of a hydro-electrical power plant by Christian missionaries to a Shuar community in the Ecuadorean Amazon. Cova’s solution to the problem is to tell the story of the power plant’s construction and failure in three voices – that of secular history, Christian mission theology, and Shuar animism, respectively – and to attend to their mutual differences and common regrets as a way of describing the multiple, partly contradictory agencies involved in the arrival of the modern power plant to the forest community. Cova’s goal is to construct a political theology attentive to the mess of Anthropocene. Like Oberborbeck Andersen, Cova is suspicious of a critique of the

secular that is content to merely highlight the realm of the magical as an anthropological critique of secular regimes as if that in itself was a political solution to environmental crisis. Cova calls this a “supersessionist logic”. By contrast, Cova advocates a nonsupersessionist approach that is blinded neither by the promise of secularism nor by that of its supersession, an approach prepared to attend truly empirically to the mess we live in.

Like Cova, **John Moran** explores the way infrastructures that are the material building blocks of secular development also mobilize nonsecular forms of reality. Moran’s paper describes how the protest of a politically vocal biologist against the construction of a series of dams on the Apalachicola river in Florida is formulated in the language of data and the law. And yet, Moran explains, the protest is also explicitly motivated by a spiritual sense that the Apalachicola river has a special “life force”, a spirituality that many Presbyterian, white, middle class protesters also attribute to Native American belief systems. Moran argues that the “ecological spirituality” in the Florida protest movement is an exemplar of a much wider phenomenon, namely the enmeshment of global environmentalism with modern spirituality. The spiritual turn that has accompanied the crisis of institutionalized religion since the late 1970s historically overlaps and intersects with the beginning of the environmental movement in interesting ways (Heelas and Woodhead 2005), allowing natural conservation to be aligned with New Age ideas of “natural religion”. Conservation and modern sensibilities towards nature in an age of extinction are deeply post-secular. Moran’s argument is that in what he calls “a Presbyterian Anthropocene” in Florida, post-secular spiritualist environmentalism is advanced through the language of science and the law.

The analysis in **Samantha Hurn’s** paper of the complex ways in which secular, cryptozoological and religious discourses overlap in places around the world is similarly an exploration of the unexpected entanglements between science and the uncanny. Cryptozoology – the study of “unknown animal forms” not recognized by natural science – is often ridiculed as unscientific and yet, as Hurn points out, cryptozoology directly engages secular discourses of animal conservation: is it, for instance, morally justifiable to kill the specimen of a cryptozoological species upon its first encounter as happened in 2015 when scientists shot a male specimen of the newly discovered moustached kingfisher (*Actenoides bougainvillei excelsus*), considered a “ghost bird” by locals in Bougainville? Cryptozoology is a science that highlights the possible reality of folk accounts of unknown species, but internally the science is torn by the question of how far its intrepid proponents are willing to go in their suspension of secular disbelief in the search for such new beings: have Zanzibar panthers survived into the present, are there were-tigers in Nagaland, do big cats live in hiding in Wales? The entanglement of science, religion, and conservation emerge elsewhere, too. How, for instance, are we to understand the use of religious language

of secular animal rights lovers who hold vigils for slaughtered animals at abattoirs? To do so requires new sensibilities and a new language. As Hurn argues, “anthropologists are particularly well placed to explore these occurrences of nonsecular phenomena in unexpected places, but in order to do so, we need to be creative, and more willing than ever to engage in and embrace multi-disciplinary and multi-ontological approaches and perspectives.”

The paper by **Pierre du Pleissis** is an attempt to build such a multi-ontological ethnography to better understand animals that are “special” and that therefore disturb epistemic boundaries. Du Pleissis explores the discomfort, his and that of his San interlocutors, that grows from the relationship between humans and lions in the Kalahari Desert. Might, du Pleissis asks, an ethnography of the Anthropocene uncanny be a matter of “going on together doing difference”, a mutual practice across epistemic and ontological difference? Lions in the Kalahari are “different” animals, animals treated with special respect by San hunters and trackers because lions, like the San people, are hunters of animal prey. Lions are also special because they at times prey on humans. Across the divide between animals and humans, lions sit uncomfortably in-between, a discomfort that expresses itself in the tingling of San armpits when a lion is nearby. Meanwhile, in a nearby animal farm that seeks to protect lions from hunting, a German man has raised a lioness and developed with her an intimate friendship. Trackers view this friendship with suspicion. Somehow the similarity between lions and humans make this friendship uncomfortable for them. The lioness in turn looks back at the trackers with suspicions from her pen, seemingly able to pick them out from the throng of ordinary onlookers who come to watch the German and the lion hug each other across the animal-human divide. For du Plessis, animal-human encounters and the embodied, and often ambiguous, sensations they produce are generative spaces where ontological difference meets in shared practice. The discomfort that tingling armpits, human-animal hugs, and lion stares produce are analytical starting points, du Pleissis suggests, for the exploration of the uncanny Anthropocene in a southern African context of hunting and herding, extinction and conservation.

Felines are uncanny in more unexpected places, too. **Mayanthi Fernando’s** paper is framed by an account of the uncanny afterlife of her cat, Hoppy. Four days after she died, Hoppy knocked over a vase. Or did it? Do ghosts exist? Do cats have ghosts? Fernando uses her own uncanny feelings stirred by the possibility that a broken vase and her dead cat might be linked to explore the history of difficulty that the secular academy has with “supernatural agency”. The urgent proximity of nonhuman presences in the Anthropocene – from invasive species and living river to living geologies and atmospheric elements on speed – fundamentally challenges the exclusive humanism of secular science. Like the other contributors to this special issue, Fernando is deeply suspicious of those who claim that some covenant with the

so-called supernatural (or the natural) is the solution. Rather, the promise of such a covenant is a false exit from secularist thought. The promise of a covenant with nature or the supernatural offers itself as a solution to secularism much like religion has done for some time, but such a promise ignores that “religion”, “nature”, and “the supernatural” themselves are secular constructs. In a tour de force reading of recent multispecies anthropology, post-humanist feminism, and literature on the new animism, Fernando suggests that her own uncanny relation to the ghost of her dead cat points to a larger secular uncanny which is provoked whenever the conventional borders between the human, the natural and the supernatural are transgressed. And yet the Anthropocene is a time of innumerable transgressions of just this kind, a time when secular language is as patently incapable of capturing reality as is religious language. Welcome to the uncanny valleys of a nonsecular Anthropocene!

## REFERENCES

- Bar-On, Yinon M., Rob Phillips, and Ron Miloš. 2018. "The Biomass Distribution on Earth." *PNAS*. Available at [www.pnas.org/cgi/doi/10.1073/pnas.1711842115](http://www.pnas.org/cgi/doi/10.1073/pnas.1711842115)
- Bestor, Theodore. 2013. "Disasters, Natural and Unnatural: Reflections on March 11, 2011, and Its Aftermath." *The Journal of Asian Studies* 72 (4): pp. 763-782.
- Bubandt, Nils. 2014. *The Empty Seashell. Witchcraft and Doubt on an Indonesian Island*. Ithaca: Cornell University Press
- . 2017. Haunted Geologies: Spirits, Stones, and the Necropolitics of the Anthropocene. In *Arts of Living on a Damaged Planet*. Edited by A. Tsing, H. Swanson, E. Gan and N. Bubandt. Minneapolis: University of Minnesota Press. Pages G1-G14.
- Bubandt, Nils, Martijn van Beek, eds. 2011. *Varieties of Secularism in Asia. Anthropological Explorations of Politics, Religion, and the Spiritual*. London: Routledge.
- Buck, Holly Jean. 2015. "On the Possibilities of a Charming Anthropocene." *Annals of the Association of American Geographers* 105 (2): pp. 369-377
- Carrington, Damian. 2017. "Warning of 'Ecological Armageddon' After Dramatic Plunge in Insect Numbers". *The Guardian*, 18 October 2017. <https://www.theguardian.com/environment/2017/oct/18/warning-of-ecological-armageddon-after-dramatic-plunge-in-insect-numbers>.
- Cixous, Hélène. "Fiction and Its Phantoms: A Reading of Freud's Das Unheimliche (the 'Uncanny')." *New Literary History* 7, no. 3 (1976): p. 543.
- Clarke, Arthur C. 1962. *Profiles of the Future: An Inquiry into the Limits of the Possible*. New York: Popular Library. Page 21.
- Crutzen, Paul. 2002. "The Geology of Mankind." *Nature* 415 (6867): p. 23
- de la Cadena, Marisol. 2015. *Earth Beings: Ecologies of Practice across Andean Worlds*. Durham: Duke University Press.
- Folger, Tim. 2018. "Crossing the Quantum Divide." *Scientific American* (July 2018)319(1): pp. 20-27.
- Freud, Sigmund. 2013. *The Uncanny*. [Original: Das Unheimliche published in 1919 in *Imago*, Band V]. Amazon Kindle Edition.
- Hand, Eric. 2014. "Injection Wells Blamed in Oklahoma Earthquakes" *Science* 345 (6192): pp. 13-14.
- Haraway, Donna. 2016. *Staying with the Trouble. Making Kin in the Chthulucene*. Durham: Duke University Press.
- Heelas, Paul, and Linda Woodhead, eds. 2005. *The Spiritual Revolution. Why Religion is Giving Way to Spirituality*. Oxford: Blackwell.



- Howe, Cymene and Pandian, Anand. 2016. "Lexicon for an Anthropocene Yet Unseen." Theorizing the Contemporary, *Cultural Anthropology* website, January 21, 2016. <https://culanth.org/fieldsights/803-lexicon-for-an-anthropocene-yet-unseen>.
- Hulme, Mike. 2009. *Why We Disagree About Climate Change: Understanding Controversy, Inaction and Opportunity*. Cambridge: Cambridge University Press.
- Latour, Bruno. 2013. "Facing Gaia. Six Lectures on the Political Theology of Nature." *The Gifford Lectures on Natural Religion*, Edinburgh 18th-28th of February 2013. Available at <http://www.bruno-latour.fr/>.
- . 2014. "Agency at the Time of the Anthropocene." *New Literary History* 45 (1): pp. 1-18.
- . 2017. *Facing Gaia: Eight Lectures on the New Climatic Regime*. London: Polity Press.
- Marshall, Michael. 2010. "Zoologger: The most bizarre life story on Earth?" *New Scientist*, 28 April 2010. <https://www.newscientist.com/article/dn18834-zoologger-the-most-bizarre-life-story-on-earth/>.
- Measey, G. J., D. Rödder, S. L. Green, R. Kobayashi, F. Lillo, G. Lobos, R. Rebelo, and J.-M. Thirion. 2012. "Ongoing Invasions of the African Clawed Frog, *Xenopus laevis*: A Global Review." *Biological Invasions* 14: pp. 2255–2270
- Mori, Masahiro. 2012. "The Uncanny Valley" [Original 1970. Translated by K. F. MacDorman and N. Kageki]. *IEEE Robotics & Automation Magazine* 19 (2): pp. 98-100
- Morton, Timothy. 2013. *Hyperobjects. Philosophy and Ecology after the End of the World*. Minneapolis: University of Minnesota Press.
- NOAA. 2018. "Contiguous U.S. had its warmest May on record." National Oceanic and Atmospheric Administration. News and Features, 6 June 2018. <http://www.noaa.gov/news/contiguous-us-had-its-warmest-may-on-record>.
- Oreskes, Naomi, and Erik Conway. 2010. *Merchants of Doubt. How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming*. New York: Bloomsbury Press.
- Pierre-Louis, Kendra. 2017. "It's Cold Outside. Cue the Trump Global Warming Tweet." *New York Times*, 28 December 2017. <https://www.nytimes.com/2017/12/28/climate/trump-tweet-global-warming.html>.
- Pope Francis. 2015. *Encyclical Letter Laudato Si' of the Holy Father Francis on Care for Our Common Home*. Rome: The Vatican. Page 44.
- Povinelli, Elizabeth. 2016. *Geontologies. A Requiem to Late Liberalism*. Durham: Duke University Press.
- Royle, Nicholas. 2003. *The Uncanny. An Introduction*. New York: Manchester University Press: p. 1

- Shiganova, T. A., and Y. V. Bulgakova. 2000. "Effects of Gelatinous Plankton on Black Sea and Sea of Azov Fish and Their Food Resources." *ICES J. Mar. Sci.* 57: pp. 641-648.
- Siberian Times, The. 2017. "7,000 underground gas bubbles poised to 'explode' in Arctic." *The Siberian Times*, 20 March 2017. <http://siberiantimes.com/science/casestudy/news/no905-7000-underground-gas-bubbles-poised-to-explode-in-arctic/>.
- Steffen, Will, Wendy Broadgate, Lisa Deutsch, Owen Gaffney, and Cornelia Ludwig. 2015. "The Trajectory of the Anthropocene: The Great Acceleration" *The Anthropocene Review* 2 (1): pp. 81-98.
- Steffen, Will, Johan Rockström, Katherine Richardson, Timothy M. Lenton, Carl Folke, Diana Liverman, Colin P. Summerhayes, Anthony D. Barnosky, Sarah E. Cornell, Michel Crucifix, Jonathan F. Donges, Ingo Fetzer, Steven J. Lade, Marten Scheffer, Ricarda Winkelmann, and Hans Joachim Schellnhuber. 2018. "Trajectories of the Earth System in the Anthropocene". *Proceedings of the National Academy of Sciences of the United States of America* 115 (33): pp. 8252-8259.
- Steffen, Will, Paul Crutzen, John McNeill. 2007. "The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature?" *Ambio* 36 (8): pp. 614-621.
- Stengers, Isabelle. 2015. *In Catastrophic Times. Resisting the Coming Barbarism*. Lüneburg: Meson Press and Open Humanities Press.
- Swanson, Heather, Nils Bubandt, and Anna Tsing. 2015. "Less than One but More than Many: Anthropocene as Science Fiction and Scholarship-in-the-making" *Environment and Society: Advances in Research* 6: pp. 149-166.
- Szerszynski, Bronislaw. 2017. "Gods of the Anthropocene: Geo-Spiritual Formations in the Earth's New Epoch." *Theory, Culture & Society* 34 (2-3): pp. 253-275;
- Temming, Maria. 2017. "Water bears will survive the end of the world as we know it." *ScienceNews*, 24 July 2017. <https://www.sciencenews.org/article/water-bears-will-survive-end-world-we-know-it>.
- Tsing, Anna, Heather Anne Swanson, Elaine Gan, and Nils Bubandt, eds. 2017. *Arts of Living on a Damaged Planet. Ghosts and Monsters of the Anthropocene*. Minnesota: University of Minnesota Press.
- Watts, Jonathan. 2018a. "Heatwave Sees Record High Temperatures Around World This Week". *The Guardian*. 13 July 2018. Available at <https://www.theguardian.com/environment/2018/jul/13/heatwave-sees-record-high-temperatures-set-around-world-this-week>.
- . 2018b. "Domino-effect of Climate Events Could Move Earth into a 'Hothouse' State". *The Guardian*. 7 August 2018. Available at <https://www.theguardian.com/environment/2018/aug/06/domino-effect-of-climate-events-could-push-earth-into-a-hothouse-state>.
- White House Briefing. 2017. Statement by President Trump on the Paris Climate Accord. 1 June 2017. <https://www.whitehouse.gov/briefings-statements/statement-president-trump-paris-climate-accord/>

BRONISLAW SZERSZYNSKI

PLANETARY SPIRIT<sup>1</sup>

Origen of Alexandria said that to be, to exist, is to have fallen. And thus, we might infer, for a world to come into existence, it has to fall. So let us take some sand and air, and add some water, and let a little world fall into existence.



This world, like all planets, falls thermodynamically, relaxes down to a lower energetic state.

But it also falls geometrically, as it emerges from a region of an undifferentiated formlessness and immanence. Our words here – ‘settle’, ‘subside’ – come from the proto-Indo-European root *\*sed-*, ‘to sit’. So we might say, to invoke the name of the ancient Hindu texts, a planet is an *Upa-ni-shad* – a near-down-sitting. But when a planet falls into being it is not a student sitting near a teacher to gain his or her wisdom, but rock and metals and volatiles and noble gases that come to sit down oh so near – and oh, what wisdom will come out of this sitting-down-near!

But in space, before the planetary fall, which way is down? Up and down, verticality, and thus the possibility of falling or rising, is neither universal nor pre-existing; it is a local phenomenon, and one that is created and enacted in the collapse itself.

---

<sup>1</sup> This performance-presentation was first given at the conference *A Nonsecular Anthropocene: Spirits, Specters and Other Nonhumans in a Time of Environmental Change*, Copenhagen, 8-10 June 2017. All images are stills from a 45-second video made by the author.

With our little world we have cheated, there is already a 'down', provided by the greater world of which this little world is a part. But even here the settling, the sedimenting, the sitting-down-near is revealing.



In the *Physics*, Aristotle argued that all of the elements want to move to their natural place in the universe; so earth and water move down, air and fire upwards (1983). In 1937 Victor Goldschmidt returned to this way of thinking with his explanation for the distribution of the elements in the body of the Earth; he thus taught us to speak of the siderophile elements that sink down to the core; the chalcophiles that form ores and remain near the surface; the lithophiles with an affinity for oxygen, and are enriched in the Earth's crust; and the atmophiles that are liquid or gaseous at ambient surface conditions and thus form the atmosphere or are depleted into space (Goldschmidt 1937).

In effect, Goldschmidt, like Aristotle, is explaining the motion of the elements not in terms of the efficient cause of applied forces but the formal cause of things finding their place. But now we must say that, just as the planet enacts the vertical in its collapsing, so too does it create a *topos* and a direction for the different elements in its very taking of form.

Yet in the melee of planetary formation, before matter can find its proper place where it can get properly entangled, bound, caught up, it can become confused – as the world 'enforms' itself its elements can be 'mis-enformed', misdirected, we might say. Some particles, especially the tiniest ones, may not ever decide which way is up – caught up in the turbulence, they may never settle, never "sit down near" at all.



And even if earth and water, or siderophile and lithophile, does eventually go down, and air and fire goes up, which way does spirit go?

A planet is a falling. The planet forming is falling towards equilibrium; by becoming actual, it is spending its potential, is relaxing to a lower energy state. But a planet is not *just* a falling. Planets in falling are also forming, and in forming they are generating the ability to do work, to create order.

So how does a planet become a 'whole full body', where its parts are not just passive strata and compartments but organs subordinated to the organism (Deleuze and Guattari 1977)? First must come the settling, the sitting-down-near, the separating<sup>2</sup> that prepares the planet to do work on itself. The Dogon of Mali have a mythic explanation of why humans have jointed limbs. Once, human limbs were unjointed, but then the Dogon culture hero, the first metalworker, went up to heaven and stole a piece of the sun from the heavenly smiths. But he fell to earth, and the shock 'broke his arms and legs at the elbows and knees ... In this way, he received the articulations specific to the new human form that was to spread across the earth, a form dedicated to work.... His arm became folded with a view to work' (Deleuze and Guattari 1988: 42).<sup>3</sup> Planets too in their falling become broken and folded into compartments and strata with a view to work. In our little world, we can see that it is like the preparation for a children's game, where entities cross the playground in both directions, and thus sort themselves into teams, ready for play.

But, secondly, if it is gravity that makes the world relax into compartments, it is the energy flow produced by continuous applied gradients that prevents the world

---

<sup>2</sup> 'Separate' comes from *se-* (apart, on one's own) + *parare* (make ready).

<sup>3</sup> See also Mary W. Helms, *Craft and the Kingly Ideal: Art, Trade, and Power* (Austin: University of Texas Press, 1993), pp. 56-7.



from relaxing to quiet equilibrium, and that over deep time brings its compartments into dynamic relation with each other. Deleuze and Guattari call this external agency that forces passive strata to become organs within an organism, machines in a larger machine, and get to work, the 'Judgement of God' (1988: 40). But we can be more specific, and call it a judgement of 'heaven' and 'hell'.<sup>4</sup>

The outer planets of our solar system, the gas giants and ice giants that exist beyond the frost line, the orbit beyond which volatiles are not burnt away by solar heat but can fall into the body of the planet, these worlds are judged by *their own past* – for these planets, the main applied gradient is the vestige of the energy of the original planetary collapse, now locked into the heart of the planet. These are the 'hell worlds'. The inner planets like our world are different, 'heaven worlds', judged by *the Sun* – forced to take form by the constant flux of energy from outside.

The breaking into strata plus the energy fluxes make it possible to do work. Thus the applied energy gradient from the sun forces each subsystem of the Earth to unending relaxation – and as it endlessly dissipates the applied energy, some of its energy does work on other subsystems and pushes them away from equilibrium (Kleidon 2010). So: the liquid mantle under the Earth's crust convects to release the inner heat – but some of that energy of convective motion lifts up the land into mountains; and the wind rushes from sea to land to try to degrade the pressure gradients – but in doing so it dehumidifies the air over the oceans, making it possible to evaporate more water, creating the water cycle; and this water cycle drops desalinated water on the land that can dissolve salts and move them around and concentrate metals into ores; and so on.




---

<sup>4</sup> See also Tyler Volk, *Gaia's Body: Toward a Physiology of Earth* (Cambridge, MA: MIT Press, 2003) on 'Helios' and 'Vulcan'.

And in this world at work, how do things move in the body of the Earth? Let me simplify into three broad types of physical motion that we can see in our little world, and how they prefigure possible social forms. First, equilibrium, stillness, and diffusion: tiny, local, multi-directional motion – here is intimacy, locality, tribe, community, gift. Second, laminar advection – long distance transport in parallel motion – here is empire, state and market. Third, turbulence, vortices, eddies that accompany and subvert the single laminar stories – these are the tricksters, rule-breaking culture heroes, the hecklers, the chaos that is the origin of order but never allows order to settle.

When planets take form, where does spirit go? Where does spirit fit in a story of planetary differentiation? The spirits of the Earth are part of a more general story of how planets pass through key moments of immanence-breaking as they self-differentiate over deep time.

We have seen how planetary falling broke the immanence of the solar nebula, and then planetary differentiation into compartments broke the immanence of the young planet. But planets, subjected over astronomically long periods to metastable flows of energy from their hot cores and ‘parent’ stars, are constantly generating otherness within themselves – sometimes fleeting, sometimes stabilised into at moments of ‘bifurcations’ into new kinds of entity with different relations between inside and outside. And at each moment of immanence breaking, there is always a remainder which exceeds representation within the terms of the new system, an excess, a longing.

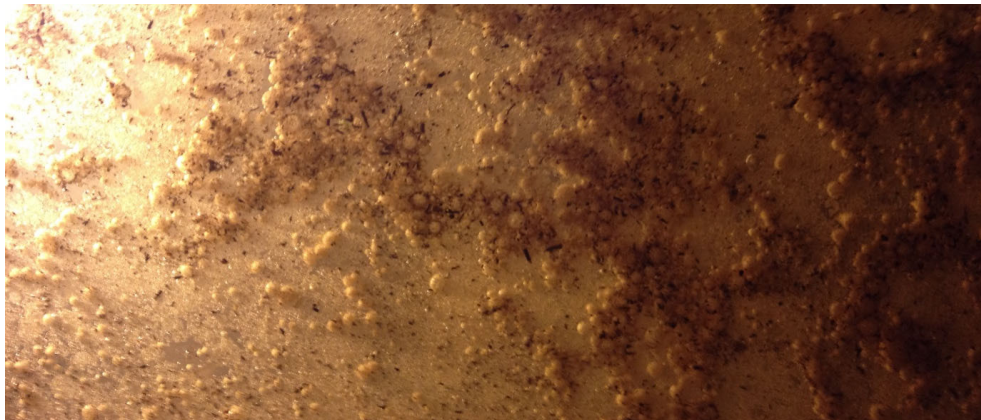
Spirits for Viveiros de Castro are non-representational ‘images’ or ‘signs’ of the originary immanence, the virtual plane of an undivided ‘intensive multiplicity’ (2007: 157-160). And for Bataille humans with culture and tools have ‘lost intimacy’ with the immanence and immediacy of animal being, which comes to play a central role within human culture as an object of both horror and fascination that manifests in the world of spirits (Bataille 1989).

And now let us try to discern in our little world ‘images’ or ‘signs’ of a time when its compartments break up even more and start to work on each other, when this world might pass through further immanence-breaking and moments of emergence of new forms – of life, societies, economy – and the world grows more complex –

emergent, alive, semiotic, social, eventually maybe technological – and its matter starts to move in more complex ways and the world finds new patterns of coherence, involving the reconfiguration of fluxes and flows, the destratification of minerals and energies and their restratification into new layers.

We do not know exactly how to name the transformation that is happening in the Earth; in attempts to provide a single story, rival totalising deities clash in the contemporary geophilosophical imaginary. For, out of the melee of these transformations are being convened ‘full bodies’ on whom these complex processes of planetary change are being coded – Anthropos, Gaia, Sol, Yahweh – and in whose name and image bands of devotees armed with their own liturgies thereby seek to advance or resist the remaking of the Earth (Szerszynski 2017).

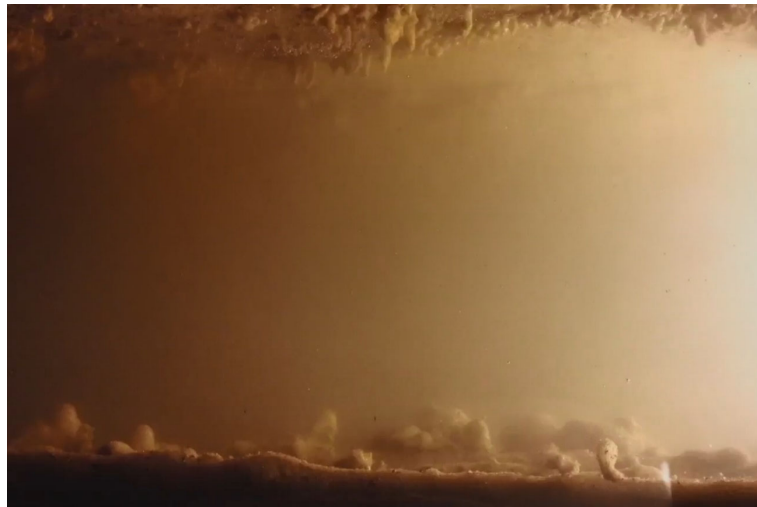
And we can use our little world to illustrate the three ‘socii’ or ‘full bodies’ that Deleuze and Guattari discuss in *Anti-Oedipus*, the recoding and reterritorialisation of the flows and powers of the Earth onto full bodies of land, despot and capital (Deleuze and Guattari 1977).



In the first socius of tribe, all flows and production are *coded* and *territorialized* into the Earth and its spirit denizens; here spirit takes the form of the left-hand sacred both light and dark, and immanence is periodically connected with through festival and shamanism. Our little world in its multiple lands and skies echoes the layered cosmos of the Yanomami of the northern Amazon rainforest (Kopenawa and Albert 2013). Omama is the demiurge, who created sun and wants everything to live forever, and the Yanomami are his people; and Yoasi is his evil brother, who introduced the moon and death. Humans and animals share the world with *yai thëpë*, ‘invisible

nonhuman beings', including the *xapiripë* or 'shamanic spirits', images of the primordial, mythological animal ancestors.

The Yanomami cosmos is storied in a double sense. The uppermost layer of the four not visible here is *tukurima mosi*, a fragile, transparent sky, 'pristine' and 'tender' (68). The next layer down is called *hedu kä misi*, the sky layer. The underneath surface of *hedu* is what we on earth actually see – the visible stars and planets. The top surface of *hedu* has trees, gardens, villages, animals, plants, and, most important, the souls of the deceased Yanomamö, who are in some sense similar to mortals. They garden, hunt, make love, eat, and practice witchcraft up there. Some, *xapiri*, are images of beings who live on the sky's back and even beyond (ibid.). Then there is 'this layer,' *hei kä misi*, where humans – the Yanomamö – dwell. Their forest is the back of the old sky which fell, which they call *wāro patarima mosior hutukara*. Finally, below this is *hei tä bebi*, which is almost barren. When the old sky fell to form 'this layer,' it pushed it and its inhabitants underground who are now the meat-hungry ancestors of the Yanomami they call the *aōpatari* or *amahiri-teri*.



How does primal immanence reassert itself in the socius of the tribe? Bataille argues that in the 'general economy' of nature, governed by the continuing gifting by the sun of its energy in unproductive expenditure, the key problem is not scarcity but abundance: 'the living organism... ordinarily receives more energy than is necessary for maintaining life; ... if the excess cannot be completely absorbed in ... growth, it must necessarily be lost without profit; it must be spent, willingly or not, gloriously or catastrophically' (Bataille 1988: 21). Like the submarine volcanoes in our little world, premodern societies do not try to hoard the flows that pass through

them. The socius of the tribes solve the problem of lost immanence and surplus through temporarily reconnecting with the sacred in festival and the *sacrifice of the useful*, placing both sacrificed and sacrificer back in immanent immediacy (Bataille 1989).

But for Deleuze and Guattari the first socius of the tribe has been succeeded on the Earth by other full bodies, the laminar recordings of empire and capital.

Empire reorders flows of both matter and spirit. With the rise of empires, despotism and military order, material flows are reordered around the city creating a metabolic rift; the powers of the Earth are *spiritually recoded* and *reterritorialized* onto the magical body of a despot, whether the earthly or celestial, who is seen as their source and ruler; and festival is replaced by warfare as expenditure and violence are both *made productive* and *externalized* – resulting in the expansion of territory and power.



And then in capitalism, living flows are directed into dead commodities; the powers of the Earth are *decoded* and *detrterritorialized* onto abstract money or capital; and the empirical world is now understood only in terms of productive expenditure, with carnivalesque waste suppressed and instead the surplus reinvested in order to grow the economy.

Let's go back to our three forms of motion, and see how the capitalist transformation of the earth generates and depends on its own configurations of spirit.

What is the spiritual dimension of the capitalist loosening of the denizens of the Earth from intimate bonds and their incorporation into global laminar flows of matter, energy and value? Marx called this *primitive accumulation*: the violent moment of separation of producer and means of production that tears individuals and groups from subsistence and gift economies and subjects them to the logic of



capital. But primitive accumulation is not a singular moment in the past, but an inherent and continuous moment involved in any transfer of value from pre-capitalist to capitalist areas, that continuously enacts and reproduces the primal split between producers and the means of production (De Angelis 2001).

This is both a physical and a psychic rupture. It is a story as old as the earth, as entities are broken out from equilibrium rest and diffusive locality and entrained in long-distance advection. But also primitive accumulation is a 'mythic' moment of fall and anti-festival - a constant operation of immanence-breaking that invokes immanence at the same time as it holds it at bay.

Any laminar, unified story of the Earth hides a story of turbulence. Within each geo-spiritual formation, along with any 'laminar' high gods come a range of turbulent entities. The wings and halos of the deities and angels are bound vortices that can be shed and themselves take flight.

The third social machine, in which capital serves as the full body of the technosphere on which all production is encoded, generates its own turbulent spiritual powers whose existence serves the full body of the capitalist geo-social formation and the accelerating movement of matter and energy around the earth – spirits that might be subject to their own kind of 'spatio-temporal fix' by being displaced in space or time or otherwise concealed. And at points of incorporation of local subsistence and gift economies into global flows, the ongoing immanence-breaking of primitive accumulation manifests as low spirits that effect the motilization involved in the incorporation of local diffusion into global advection.

Let me mention three examples – cannibal, devil and vampire.<sup>5</sup> The cannibal *xawarari* spirits of the Yanomami, are 'first socius' reterritoralisations of Anthropocene violence in a tribal cosmos. White people are *Yoasi thëri*, ('people of Yoasi', Omama's evil brother), and dig up the oil and metals that are the blood and bones of the earlier sky that fell, cook them in their factories, and make the metal tools, cotton cloths, and plastic goods that they offer to the Yanomami in trade, that give off dangerous fumes that have in turn produced an invasion of evil cannibal spirits, the *xawarari*, spirit doubles of the white people that eat the chests of the Yanomami and make them sick, and the chest of the current sky and threaten to make it, too, fall (Kopenawa and Albert 2013: 288).

---

<sup>5</sup> For more on these figures, see Szerszynski, "Gods of the Anthropocene,".

The Devil appears at moments of expropriation, as local gift economies are incorporated into global flows (Taussig 2010, Ball 2014). The Devil is a second-socius figure who nevertheless comes to express third-socius forms of global magic, a foundational infant fantasy of omnipotence, a denial of the aporetic metabolic relation between inside and outside, a being who has no life of his own so survives only by capturing life. From the late medieval period onwards the Devil is associated with the production of money from money and the conversion of the energies of life into dead commodities (Brennan 2000).

Finally, the vampire is a third-socius figure of capital. Stories of vampires around the world appear in colonial contexts as blood-sucking agents of colonialism. The vampire is a deterritorialized, global monster, set to subjugate the world; a global, totalising figure of the bourgeoisie – a saver, who must use every drop, who cannot die, and who must create ever more victims and subjugate the whole of society (Moretti 1982; Tsuneishi 2012).

What has our experiment with a small, synthetic, self-organising world shown us? We need to be more imaginative about the possible paths that could be taken in the self-organisation of matter in planetary evolution. We need to cultivate a ‘speculative planetology’ that draws on the physics and philosophy of self-organisation; on our growing knowledge about the long story of our planet; on vernacular investigations of matter and how it behaves; on an engagement with the diversity of cultures and literatures on the Earth; and an openness to the nonsecular dimensions of planetary transformation.

## REFERENCES

- Aristotle. *Aristotle's Physics, Books Iii and Iv*. 1983. Translated by Edward Hussey. Oxford: Oxford University Press.
- Ball, Kimberley. "The Devil's Pact: Diabolic Writing and Oral Tradition." *Western Folklore* 73, no. 4 (2014): pp. 385-409.
- Bataille, Georges. 1988. *The Accursed Share: An Essay on General Economy*. New York: Zone Books.
- . 1989. *Theory of Religion*. New York: Zone Books.
- Brennan, Teresa. 2000. *Exhausting Modernity: Grounds for a New Economy*. London: Routledge.
- De Angelis, Massimo. "Marx and Primitive Accumulation: The Continuous Character of Capital's "Enclosures"." *The Commoner* 2 (2001).
- Deleuze, Gilles, and Félix Guattari. 1988. *A Thousand Plateaus: Capitalism and Schizophrenia*. Translated by Brian Massumi. London: Athlone Press.
- . 1977. *Anti-Oedipus: Capitalism and Schizophrenia*. Translated by Robert Hurley, Mark Seem and Helen R. Lane. New York: Viking Press.
- Goldschmidt, V. M. 1937. "The Principles of Distribution of Chemical Elements in Minerals and Rocks. The Seventh Hugo Muller Lecture, Delivered before the Chemical Society on March 17th, 1937." *Journal of the Chemical Society (Resumed)* (1937): pp. 655-73.
- Helms, Mary W. 1993. *Craft and the Kingly Ideal: Art, Trade, and Power*. Austin: University of Texas Press.
- Jessop, Bob. 2006. Spatial Fixes, Temporal Fixes and Spatio-Temporal Fixes. In *David Harvey: A Critical Reader*. Eds.: Noel Castree and Derek Gregory. Oxford: Blackwell: pp. 142-66
- Kleidon, Axel. "A Basic Introduction to the Thermodynamics of the Earth System Far from Equilibrium and Maximum Entropy Production." *Philosophical Transactions of the Royal Society B: Biological Sciences* 365, no. 1545 (2010): pp. 1303-15.
- Kopenawa, Davi, and Bruce Albert. 2013. *The Falling Sky: Words of a Yanomami Shaman*. Cambridge, MA: Harvard University Press.
- Marx, Karl. 1976. *Capital*. Translated by Ben Fowkes. New York: Vintage.
- Moretti, Franco. "The Dialectic of Fear." *New Left Review* 136 (1982): pp. 67-85.
- Szerszynski, Bronislaw. "Gods of the Anthropocene: Geo-Spiritual Formations in the Earth's New Epoch." *Theory, Culture & Society* 34, no. 2-3 (2017): pp. 253-75.

- Taussig, Michael T. 2010. *The Devil and Commodity Fetishism in South America*. Chapel Hill, NC: University of North Carolina Press.
- Tsuneishi, Norihiko. 2012. Specters of Capitalism: Ghostly Labour and the Topography of Ruin in Post-Industrial Japan. In *Twisted Mirrors: Reflections of Monstrous Humanity*. Edited by Seth Alcorn and Steven Nardi. Oxford: Inter-Disciplinary Press: pp. 129-38
- Viveiros de Castro, Eduardo. "The Crystal Forest: Notes on the Ontology of Amazonian Spirits." *Inner Asia* 9, no. 2 (2007): pp. 153-72.
- Volk, Tyler. 2003. *Gaia's Body: Toward a Physiology of Earth*. Cambridge, MA: MIT Press.

ASTRID OBERBORBECK ANDERSEN

OF VOLCANOES, SAINTS, TRASH, AND FROGS:

Eschatological talks and plural ecologies in Arequipa, Peru

## PROLOGUE

This paper is situated in an urban landscape, in the city of Arequipa in Southern Peru. It is written with material generated during doctoral ethnographic fieldwork in 2011-2012, focusing on water scarcity, different responses to climatic changes, and political collectives coming together around water-flows.

When writing my dissertation in 2013-14, I was inspired by the materialist approaches in anthropology of the environment and political ecology (Harvey 2010, Bennett 2010). During fieldwork and when writing, I paid special attention to material-discursive practices. Water flows, infrastructure, institutional practices and technologies dominated my materialist-inclined analysis, and although stuff that can be called nonsecular flourished in the material - saints, divinity, volcanic, mountain and other forces, *gentiles*, extra-terrestrials - I did not know what to do with it. It did not sit well with materiality. Revisiting notes and other kinds of material for this paper for the conference “A nonsecular Anthropocene”, I realised that in the analyses for my dissertation, I had done great efforts of secularising the nonsecular ecology of Arequipa. Several layers of the landscape are not present in my dissertation and posterior publications (See Andersen 2016, 2018). In this paper, I will try to bring out some of these elements, and work with them in an exploratory manner, to find a place for nonsecular forces in the urban ecology.

## LOCATING THE URBAN ECOLOGY OF AREQUIPA

Arequipa is placed at 2,400 metres above sea level, on the edge of the Atacama Desert, in southern Peru. Rainy season spans from December to March, the rest of the year is warm and dry, which makes it pivotal to have the capacity to store huge volumes of water. Water reaches the city via the Chili River and originates from the same few sources. A grand hydraulic system consisting of seven dams, rivers and canal connections in the highlands regulates, transports and releases water to its



functional destinations in and beyond the city. This hydraulic system assembles many public and private institutions and companies in the operation, management and distribution of water.

The topography in and around the city of Arequipa is characterized by verticality and pronounced geology; three volcanoes embrace the city, pointing towards the high Andean ridge, making up a landscape of faults, steep slopes and inclines. Populated settlements span between altitudes of 2,100 to 3,000 metres above sea level. This vertical and irregular landscape has implications for the flow of water, the construction of houses and infrastructure, and for the development of social life. Arequipa sits in a zone of high seismic activity. Small and large earth quakes periodically shake the ground, and the three volcanos stand out as figures of majestic posture in the topography, and – as other high peaks in the Andes – carry a long history as authorities in the hierarchical and social order of things in and around the city (see de la Cadena 2010).

Misti, the most emblematic of the three, has not erupted since the 15th century, but is still potentially active. Misti is its Spanish name, meaning mestizo, its precolombian Quecchua name is Putina, referring to the thermal waters in its vicinities. Hualca Hualca is extinct, and even its shape is that of a sleeping being. Chachani, said to be the jealous girlfriend of Misti, was active before the ice ages, and still geothermally active. Explosive eruptions generated rhyolitic tuffs, and spilled out enormous deposits of ignimbrite that stretch out in the subsurface of the area. These are the materials (also named *sillar*) that Spanish settlers used to build their colonial town from 1540 onwards. The grounds of Arequipa are rich in minerals, and house several informal gold mines and Cerro Verde, Peru's largest copper mine, and the 5th largest in the world (Freeport McMoRan controls 53.56%).

The volcanos generate hydrological conditions that make life in Arequipa possible. Without these volcanoes, the Arequipan landscape would be desert, like its surroundings. In this particular ecosystem the volcanoes used to serve as natural water storage, gathering snow on their peaks during rainy season, which would melt during dry season, make water run through creeks and rivers, and filter into the soil and feed aquifers. Now, warming and changes in patterns of precipitation have resulted in little storage of snow and ice on the volcanoes, the cycle has shifted, and the dynamics of storage and availability have changed dramatically. Instead of melting water running from the peaks, dams have been built in the highlands for

water storage and regulation. Water availability is prolonged, yet the concrete constructions in the highlands is too far away to see, and although these infrastructures provide vitality to the city, they are not linked to identity of *arequipeños* the same way as the volcanos.

In the city, water is used by a growing urban population of approximately one million inhabitants, and it is used for farming, industry, tourism, hydropower and by Cerro Verde, Peru's third largest copper mine that is expanding its production to become the second largest copper mine in the world. Cerro Verde is located 32 km Southeast of the city centre, downstream. As the demand on the limited water sources grows, supply and distribution become contested issues. People in Arequipa experience changes in weather, climate, in environment and society, and they draw on various registers to understand and respond to these changes. Contamination, less rain and snow and ice covering the peaks, sudden cold, earthquakes, droughts or extremely heavy rainfall and flooding are events that happen side by side with political elections, family diseases, daily work, and economic fluctuations. During fieldwork volcanoes, saints, trash, plants, God, water, orbits, and frogs were among the nonhuman entities referred to in conversations and engaged with when responding to the changes that trouble the world and everyday life of *arequipeños* (people from Arequipa). This paper gathers stories about the agencies of nonhuman entities, and asks what anthropology can do to carve out a space for these beings in Anthropocene scholarship. Rather than emphasising the magic dimension of these beings, the paper suggests a realist concept of plural ecology – one open to beings of different registers and dimensions - when trying to understand and scholarly intervene in an Anthropocene present.



Figure 1. Arequipa seen from Puenete Bolognesi. Behind the city centre, to the north, volcano Misti.

## URBAN WEATHER-TALK

In May 2011, I joined two female workers from the municipal district of Cayma on their monthly tour to marginal neighbourhoods, where provisions of powdered milk and cereals are distributed to mothers of young children. This distribution was part of a national Peruvian programme called *Vaso de Leche* – glass of milk - which provided nutritional support to children of poor families. In Cayma, the milk and cereal was distributed by two social workers, Bridget and Edith, and a driver, Señor Jacinto, in a big old yellow pickup truck. On such distribution tours, all marginal neighbourhoods of Cayma were visited. I joined the distribution this day because I was looking for an area in which to study neighbourhood organization and access to drinking water.



Figure 2. Yellow municipal pick-up distributing milk in the district of Cayma. Volcano Chachani in the back.

Since the 1960s, an increasing migrant population has been adding to Arequipa, transforming the irregular terrain around the city into urban landscape, developing new neighbourhoods with necessities of water, electricity and other services. The city expands out and upwards, and most of the new settlements are situated on volcano slopes or in arid areas.

On the distribution tour, we stopped in every neighbourhood to deliver a counted amount of powdered milk and cereals in little bags to the neighbourhood president of *Vaso de leche*. The day was opaque and rather windy; clouds of dust were periodically lifted from dirt roads, and blowing through the areas we were passing. The atmosphere in the car was cheerful. As we went along the milk route, the talk travelled along a variety of themes: Peruvian dishes, politics and upcoming presidential elections, social differences, neighbourhood development in Arequipa

and quality of life in Denmark. During one of the stops, the conversation started turning around the weather.

- Bridget: *It is a strange day today [el día está raro], so many clouds around the volcanoes...*
- Jacinto: *We are in May; weather is never like this in May. The clouds are charging, as if it is going to rain. Probably this year it will be raining already in August. Normally, the sky looks like this in September...*
- Astrid: *And why would it be like this now?*
- Bridget: *I wonder why the climate is changing... some say it's because the world is going to end in 2012... but I don't believe in that.*

We went on talking a bit about the Mayan calendar and different end-of-the-world theories.

- Bridget: *I wonder what the end of the world will be like [cómo será el fin del mundo]... will it be a big atomic bomb? Or an enormous earthquake or natural disaster... But the impacts of these disasters are always limited; they don't bring the whole world to an end... Maybe it will be a world war. Yet it would take many years for it to arrive in Peru.*
- Jacinto: *I once saw a movie in which the ocean eats the entire earth; no human being is left, and it looked terrible.*
- Astrid: *Some say there will be a world war because of water.*
- Bridget: *Yeah, that's because fresh water will be used up. Here in Peru, for instance, the glaciers are disappearing, and that means we increasingly have less fresh water. All fresh water goes to the sea and becomes salt water.*

Edith returning to the car, joined the conversation:

*Don't say those things. Here in Peru we have many saints [muchos santitos] that protect us.*

She looked towards the sky:

*But it is true; the weather [el clima] is indeed very strange today...*

As we kept driving upwards, the neighbourhoods around us became of more recent date. Precarious houses built in stone. Bridget had kept thinking about the weather, it seemed; after a while of silence she commented:

*Arequipa used to be full of frogs. They are gone now. Some people say they are having an assembly in a secret place, planning how to take back the land that was once theirs.*

The conversation we had in the yellow municipal pickup took place in a particular and utmost quotidian here and now, in which the focus was all of a sudden pushed towards the end of human history – the exact time of occurrence being unknown – by clouds oddly gathering around the Arequipan volcanoes. The oddity of the phenomenon was due to seasonality rather than the occurrence itself: clouds embracing the volcanoes are known as signs of soon coming rain, which is a phenomenon seen in September and *not* in May. What to the person from outside seemed like a small alteration in weather patterns, triggered uncertainty of the near and far future among local Arequipans.

I want to draw attention to the different elements or reference points drawn into and enacted in the conversation: Catholic saints, cinematic fiction, local meteorology, Mayan calendars, frogs, natural disasters and world wars were equally pulled into the talk, in order to make sense of and create some kind of response to the odd clouds being observed around the volcanoes. Each of these elements corresponds to a particular contextual, temporal and spatial logic, and each holds a different place in memory, imagination and expectations for the future.

It would take a long time for a world war to reach Peru - since Peru is felt as marginal to world history. Saints are protecting Peruvians all the while glaciers are melting and frogs are gathering to organize their taking over the world. The categories of secular and nonsecular, or sacred, make little sense here. Instead, a diverse vocabulary or repertoire offers itself to the particular event in which the persons present negotiate how sense is to be made. I propose to approach the repertoire of elements as parts of a plural ecology.



To build on this conversation and get closer to the plural ecology, I will trace some of the elements to other situations. Volcanoes first.

## ICONS OF CHANGE: DARKENING PEAKS

In Arequipa there is a general agreement among people that weather and climate have changed. Most people point towards the emblematic volcano Misti when asked to explain and prove these changes; they lament that Misti hardly ever wears his white poncho anymore. Misti used to be covered with snow - white to his feet - all year long, but now only the very top is covered with snow, and this only during the rainy season that stretches from December till March or April.

Like other places in Peru and in tropical regions with mountain glaciers, the “darkening peaks” (Orlove et al. 2008) around Arequipa act as both icons and evidence of climatic changes (Andersen & Nielsen 2014, Stensrud 2016b). Misti, Chachani and Picchupicchu stand out in the urban landscape and can be seen from almost everywhere in the city. Señor Misti is evoked in poems, songs, ceremonial offerings, and in public demonstrations. For some, he is a significant *Apu*<sup>1</sup>, a person of authority and powers; for others he is the fiancé of the female city of Arequipa. He is said to be the reason for the characteristic strong temper of Arequipans. Five child mummies have been found in his crater, witnessing the respect with which the Incas engaged with the *Apu*. Misti marks the landscape and makes an infrastructure for identities in the city, and for how to understand historical changes and particular weather events. Whereas the volcano is a reference point for assessing the impact, pace, and truth of changes taking place on a grand scale, the frogs disappearing articulate a reaction to the actions of people in Arequipa.

People use well-known features of the landscape as reference points when it comes to assessing the impact, pace, and truth of changes including climatic ones. The frogs and the volcanos are “icons of climate change” (O’Neil and Hulme 2009) that present themselves as a way to compare how people experience change in climate over time, and how these changes challenge particular identities tied to the places that are undergoing change. In their efforts to assess and make sense of the

---

<sup>1</sup> Apus are described in anthropological literature as mountain lords, protectors or guardians of peoples living in the Andes. See Allen 1988; de la Cadena 2010; Stensrud 2016a.

changes happening in their near environment, frogs and volcanoes are drawn on in an equal manner.

## FROGS AND OTHER MARKERS OF DEGRADATION

The frog assembly mentioned by Bridget while driving was not the only time frogs appeared in conversations about changes in the urban landscape and ecology. Several times, I experienced frogs mentioned as indicators of degradation of soil and the environment of the city.

Consider this excerpt of an environmental awareness talk at a secondary school named 'Our Virgin Fátima'. We – a female environmental engineer from the regional environmental authorities, a communication worker, an engineer, and a puppet from the potable water company Sedapar, and me were visiting the school to educate and sensitize teenagers about the environment. As we entered the public secondary school run by nuns, the pupils were singing a song to the Virgin Fatima, all lined up in their uniforms. The awareness talk was introduced with these words:

*We are all responsible for all the environmental problems from which we suffer. The problem of contaminated water, air, the problem of solar radiation, the contaminated river... we are all responsible for the theme of contamination. So we should all have positive attitudes towards our environment; it gives us everything: air, water, foods... The environment is a set of elements that integrate this earth that we call biosphere, and that sustains our homes. And not only we live on this planet, also animals, plants, and if we are affected by this contamination, so are they. So we should learn to take care of all that exists in our surroundings. It all depends on man (el hombre) (...) During the last years in Peru, environmental contamination and depredation of the natural resources have brought many species close to extinction. For example, before, when it was raining, the first thing to appear were the frogs. Now, the frogs no longer exist...*

In this talk, the environment was enacted as a singular: *the* environment, biosphere, earth. Interdependence is emphasised between man and the environment, but man – as the pupils at school – is held responsible, as steward, of damage as well as of possible well-being of the biosphere. Frogs, here, are mentioned

merely as indicator and evidence of environmental degradation; not as agents actively waiting to return to take over earth.

On another occasion, the frogs were mentioned by a farmer, also as indicators, but in an ecology ascribed a different kind of agency. During an interview, while he was irrigating his fields of alfalfa within the city, which he cultivated to feed guinea pigs, the farmer lamented that insects and frogs were gone from his fields now, due to contamination. He told that he was irrigating by gravity, for three hours once a week, and for this he paid an annual tariff to the farmers' association that manages this water flow. "We always lack water," he lamented. "These soils are lacking water; and besides, they don't give anymore (*ya no da*). They have been producing since the Inkas; people take and take, they have taken out all blood from the soils, and the land has no elements anymore. We give them *urea* (nitrogen fertilizer), we give them synthetics for them to produce, but they don't give!" Slightly annoyed he went back to his field to move the stone and make the water flow to the next plot.



Figure 3. Farmer irrigating his fields in the urban district of Cayma.

"The poor soil no longer has nutrition for its own plants..." He told us the soil was poor, the climate changing, everything being more dry; also, the frogs that used to come out after any rain are gone, and there are more plagues now. Mauricio, 52 years old, and making a living from his fields here and in the highlands, and in informal gold mining.

"Why all these changes...? The earth no longer is what it used to be; the earth is not a thing that will not suffer from what we do to her. Her elements are being used (*se van gastando sus elementos*).

Elements, I often heard the Spanish word *elementos* used to describe and situate vital substances in the surroundings or environment:

“The minerals are taken and taken; of course there have to be changes! These elements are no longer inside the earth” (other farmer in the same area of fields, in Cayma).

Connections. Farmers and other inhabitants of the city emphasised cause and effect; connections. The climate punishes with a sudden freeze, destroying crops. An earthquake will cause a sudden change in weather, although meteorologists say it’s not true. A sudden change in weather influences the health of people; children get ill and it affects the bronchi. The moon also influences the weather.

Connections. Cause – effect. Giving and receiving. If taking without respect (minerals or crops), punishment may fall. A relational ecology.

Mauricio’s wife Josefina joined us, and we chatted about the weather, irrigation, and constructing lives between the city of Arequipa and their village of origin in the highlands. Josefina told us that in the village irrigation water was managed differently than in the city. In the village, every year a different person was appointed *regidor*, in charge of distributing water to the fields of villagers. Josefina was appointed ‘regidora’ last year. Just after having received the charge, she told us, she fell in the field and sprained her ankle. “The spring has powers” Josefina said, “and I had not crossed myself with water before taking over as a *regidora*... The house also has powers,” she continued, you have to *challarla*, *tinkar*, to all four corners. If you don’t respect that, you might fall ill.”

Crossing oneself with water is practiced in the catholic church. *T’inka* is an Andean practice of giving drops of beer to the earth-mother or mountain lords in respect. *Challa*, in the main quechua dictionary is translated as ‘sprinkling or splattering of liquid matter’ (Stensrud 2016c: 254). Whether or not Josefina was emphasising the crossing because she was speaking in Spanish, I do not know, but she was spontaneously talking about the powers that she has to engage with in her near surroundings, and which affect her if she does not respect them.

ELEMENTS, POWERS, RESPECT, CONNECTIONS, CAUSE-EFFECT.

We might ask ourselves what is new here? And one answer may be nothing... For decades, these kinds of practices and articulations all over Latin America have been

read and understood through the terms of religious and cultural syncretism, or processes of hybridisation, known as *mestizaje*. What is wrong with those terms?

We might say that syncretism, hybridisation, *mestizaje* emphasise emergence. But they are criticised for depicting the Andes as a region in which separate and different cultural or religious units have merged, and in this process, difference is erased.

Recently, scholars working in the Andes, as Marisol de la Cadena (2010, 2015), Fabiana Li (2015), and Astrid Stensrud (2016a, 2016b, 2016c), among others, have put great effort into working the Andes through a vocabulary that sticks with differences and complexity in the many kinds of existence.

These scholars write about how earth beings like mountain lords and water bodies sometimes emerge as active parts in struggles and protests against mining companies or other development projects (De la Cadena 2010, 2015), or are evoked in everyday world-making efforts (Stensrud 2016a). These practices and beings are qualified as ‘indigenous cosmopolitics’ that insist to open up political spaces for beings that are not recognized by states or by history. In this literature, the practices rarely mix with catholic patron saints.

Arequipa is an urbanized landscape, the city is expanding, and the physical environment is continuously transformed. People who have lived there for several decades recall a very different city: fewer cars, less contamination, and more cultivated fields within and around the city. While the urban landscape keeps changing, the three volcanoes that embrace the city used to represent certain continuity. Yet, with their ‘darkening peaks’, the volcanoes, especially Misti, become indicators and evidence of changes not necessarily linked to the growing city but to a globally changing climate.

## CONCLUSION

The Arequipan urban landscape is pervaded or soggy with what we might call religiosity and animism, in the shapes of churches, and sanctuaries with catholic saints and virgins, making significant places in the urban landscape, and practices oriented towards these reference points.

When passing such places while traveling by bus within the city, many people cross themselves repeatedly. In this landscape, how can we think of including these beings into a concept of a non-magical ecology?



The notion of a plural ecology, one in which difference exists; different elements or beings that demand different kinds of registers of attention and practices in order to prevent or provoke their agencies; and which offer different possibilities of relating to in a future of changes.

What kind of analytical vocabulary does the concept of plural ecology offer? Is it not a flattening out of what people in Arequipa talk of as miracles, natural disasters, blessings, protection, if the different elements are situated in the concept of ecology? What kind of order does ecology as concept offer, and can it embrace the different registers that people in Arequipa draw on and relate to?

As this is a working paper, I allow it to hold an open ending, proposing the notion of plural ecology as an experiment to grasp plural registers of being in an urban nonsecular ecology.



## EPILOGUE

I suggest the plural ecology to be a realist approach; one that evades describing the practices of people in terms of belief. This is not a Platonic realism, in which universals or abstract concepts are thought to have an objective or absolute existence.

Rather, it is a real that comes into being when things are enacted or being done (Mol 2003). This view to realism also implies a commitment of the ethnographer (Winthereik and Verran 2012), in the sense of moving away from representation, towards re-presentation (W&V following Ian Hacking 1983 that ethnography is making reality). Jane Bennett (2010) claims that projecting a “naive realism” into scholarly work will foster appreciation of thing-power.

Inspiration from Latin American literature could lead to the genre of magic realism, understood as the genre of art and literature that expresses a primarily realistic view of the world while also adding or revealing magical elements, or multiple layers of realism. However, the consequence of a plural ecology as the one I propose might be understood as a non-magic, nonsecular realism.

The notion of a plural ecology draws inspiration from conceptual developments of a *pluriverse*, as proposed by Marisol de la Cadena (2010) and Arturo Escobar (2017). This line of thought is to be further developed, as is an elaboration of the ways in which the plural elements relate or not to one another; is it in complexity of partially connected world-making practices? (Stensrud 2016a)

## REFERENCES

- Allen, C.J. 1988. *The Hold Life Has: Coca and Cultural Identity in an Andean Community*. Washington, DC: Smithsonian Institution Press.
- Andersen, A.O. 2016. "Infrastructures of progress and dispossession: Collective responses to shrinking water access among farmers in Arequipa, Peru." *Focaal* (74) (2016): p. 28-41. DOI: <https://doi.org/10.3167/fcl.2016.740103>
- . 2018. "Purification. Engineering water and producing politics." *Science, Technology, & Human Values*, Vol. 43(3) (2018): pp. 379-400. DOI: 10.1177/0162243917723079
- Andersen, A.O. & J.Ø. Nielsen. 2014. Icons of Climate Change: Mirroring the Sahel and the Andes. In: K. Hastrup & C. Rubow (Eds.): *Living with Environmental Change: Waterworlds*. London / New York: Routledge, pp. 214-218.
- Bennett, J. 2010. *Vibrant Matter: A Political Ecology of Things*. Durham: Duke University Press
- De la Cadena, M. 2010. "Indigenous cosmopolitics in the Andes: Conceptual Reflections beyond "Politics"." *Cultural Anthropology*, Vol. 25(2) (2010): pp. 334-370. DOI: 10.1111/j.1548-1360.2010.01061.x
- . 2015. *Earth Beings: Ecologies of Practice Across Andean Worlds*. Durham: Duke University Press
- Harvey, P. 2010. "Cementing relations: The materiality of roads and public spaces in provincial Peru." *Social Analysis* 54(2) (2010): pp. 28-46. DOI: 10.3167/sa.2010.540203
- Law, J. 2015. "What's wrong with a one-world world?" *Distinktion: Journal of Social Theory* 16(1) (2015): pp. 126-139, DOI: 10.1080/1600910X.2015.1020066
- Li, F. 2015. *Unearthing Conflict: Corporate Mining, Activism, and Expertise in Peru*. Durham, N.C.: Duke University Press
- Mol, A. 2003. *The Body Multiple. Ontology in Medical Practice*. Durham: Duke University Press
- O'Neil, S.J and M. Hulme. 2009. "An iconic approach for representing climate change." *Global Environmental Change*, Vol. 19(4) (2009): pp. 402-410, DOI: 10.1016/j.gloenvcha.2009.07.004
- Orlove, B., E. Wiegandt, B.H. Luckman. 2008. The Place of Glaciers in Natural and Cultural Landscapes. In: Orlove, B., E. Wiegandt, B.H. Luckman (Eds.). *Darkening Peaks. Glacier Retreat, Science, and Society*. Berkeley: University of California Press: pp. 3-19.
- Stensrud, A.B. 2016a. "Climate Change, Water Practices and Relational Worlds in the Andes." *Ethnos* 81(1) (2016): pp. 75-98. DOI: 10.1080/00141844.2014.929597

- . 2016b. "Harvesting Water for the Future. Reciprocity and Environmental Justice in the Politics of Climate Change in Peru." *Latin American Perspectives* 209. Vol. 43(4) (2016): pp. 56–72. DOI: 10.1177/0094582X16637866
- . 2016c. "It Seems Like a Lie": The Everyday Politics of World-Making in Contemporary Peru. In: Bertelsen, B.E. & S. Bendixsen (Eds.). *Critical Anthropological Engagements in Human Alterity and Difference*. Basingstoke: Palgrave Macmillan: pp. 253–272. DOI 10.1007/978-3-319-40475-2\_11
- Winthereik, B.R. and H. Verran. "Ethnographic Stories As Generalizations That Intervene." *Science and Technology Studies* 25(1) (2012): pp. 37–51.

JESSICA MADISON

GOLDEN MOUNTAIN, IRON HEAP:

A Poetic Ethnography of Extraction in Eastern Mongolia

In eastern Mongolia, just north of the seam that splits the grassland steppe from the Gobi desert, the tiny town of Dariganga sits at the foot of the holy mountain Altan Ovoo. This “Golden Mountain,” which poet G. Mend Ooyo called “a microcosm of the world” anchors the center of the Dariganga nutag, a region known across Mongolia for its holy mountains, migrating swans, fast horses, and famous poets. Bisecting this grassland is a dirt road that connects two of my field sites: Dariganga *soum*, or administrative district, and the Sukhbaatar province capital of Baruun-Urt.

Travelers approaching Dariganga from the north will often stop at a small crest in the road, from which one can catch a first glimpse of the Golden Mountain’s distinctive volcanic curve silhouetted above the horizon. However, if one were to turn around and drive in the other direction, the 120km back to Baruun-Urt, one would see another mountain emerge into view: Tömörtiin Ovoo, a zinc mine operated by the Chinese-owned Tsairt LLC. The spoil banks of Tomortin Ovoo cut a figure typical of the mining projects that have increasingly come to characterize the landscape since the start of Mongolia’s mineral extraction boom in 2010.

As mines proliferate, and the unbroken flatness of the steppe is challenged, poetic performance is increasingly being marshaled to hold these landscapes together. Mining operations have been known to hire poets trained in singing and reciting folk poetry as a precaution against mining accidents: quieting the spectral entities that have been disturbed during excavation.

The beauty of the Dariganga Nutag is inextricably linked with poetry via a tradition of mimetic genres in poetry, traditional music, and dance. Mimetic genres like *urtiin duu* or “long song”, both describe and mimic the undulating contours of the steppe or the rolling gallop of a fast horse. Poetic performance is both reliant upon and productive of a mutual rapport between human beings, non-human creatures, various spirits, and the features of the landscape. This rapport is essential to the formation of a *nutag*, a term which denotes not only the idea of a homeland itself, but also the notion that humans and non-humans create community through



productive relations across difference, a community which then goes on to designate territory which they share.

Bordering China to the southeast, the Dariganga Nutag is also home to the Dariganga yastan, a sub-ethnic group of about 30,000 people. Dariganga was considered part of Inner Mongolia until 1912 when they petitioned to join the newly sovereign Mongolian nation under the Bogd Khan. The community of humans and non-humans both living and not form the nodes of the Dariganga Nutag. There are the holy mountains Altan Ovoo and Shiliin Bogd, steppe antelope, the bodhisattva White Tara who guards the swans of Ganga Nuur, one wild donkey, the staff of the New Dariganga tourist camp, the ancestral spirit of outlaw horse thief Toroi Bandii, various sage grasses, Gobi sand dunes, packs of both feral and domestic *khashaa* dogs, and the intermittent presence of an American English teacher turned anthropologist.

*Ovoo* play a central role in forming the *nutag* multispecies landscape. Though the term *ovoo* can mean either mountain, heap, or cairn, what Rebecca Empson calls "heaps and accumulations" (2011), its ritual meaning refers to any constructed physical structure that serves to accumulate collective celestial fortune. The *ovoo* is multifunctional: it can act as a site of sacrifices to local deities and spirits, as a border marker, and as a physical manifestation of the link between humans and land. The *ovoo* situated atop a mountain, hilltop, or in the case of the steppe, a rise with an "auspicious configuration" (Atwood 2004) is a ubiquitous sight across the Mongolian landscape. *Ovoo* accumulate materials through the offerings of those who pass by, who must contribute something to the pile to gain energy and avoid misfortune. Offerings can simply be more stones, or something more specific like horse skulls, car parts, candy, tea or rice, even Barbie dolls if one is looking to bolster the quality of their feminine attributes. *Ovoo* in more heavily Buddhist areas, like Sukhbaatar, can be built with three levels and twelve small heaps in the cardinal directions, imitating the continents around Sümer, the world-mountain in Mongolian Buddhist cosmology. Regardless of the religious context, *ovoo* rituals are quite similar everywhere. The deities worshiped are various *tenggeri* (pre-Buddhist sky deities), dragons who control rain, *gazariin ezen* (masters of the land), shamanic ancestor spirits, and so on. Buddhist worship will also invoke the bodhisattvas, such as white or green Tara, or Vajrapani, sometimes thought to be emanated in the body of Chinggis Khan.

One of the most important of these heaps is Altan Ovoo, the imagined center of the homeland and the primary character in my research project. Like other holy mountains in the region, such as Shiliin Bogd, or, further south, the energy center Khamaryn Khid (shambala) it is both a representation of a perfected microcosm of the world and the dwelling place of the gods (or God poets like the Danzan Ravjaa).

Altan Ovoo fuses together concepts of both the sacred mountain and the mandala—a diagram of a perfect universe. However, sacred mountains pre-date Buddhism in Mongolia, and their veneration is rooted in shamanic traditions in which they act as referents to the World Tree and the vertical axis of a shaman's ascent and descent into other worlds (Humphrey 1996). For centuries, the magical ecology of the Dariganga Nutag has spun around this axis, with all of its related network of humans, non-humans, spirits, and objects material and immaterial.

Central to the practice of *ovoo* worship are the notions of *erdene* and *khishig*, which for simplicity's sake I translate here as treasure and fortune respectively. Both of these notions are central to the argument that *ovoo* are sites that both produce energy and demand sacrifice, and may help shed light on how, in the contemporary moment, mines come to be considered *ovoo* along with sacred mountains.

*Erdene* denotes treasures or valuables that are obtained through interactions with different sets of relations that are at once inside and outside the *nutag* community. These can be among/between living humans, the deceased, the unborn, and nonhuman entities such spirits, ancestors, deities. These can also include an array of “energies” that are sometimes differentiated as coming from separate categories of beings and things: wild animals, mountains, healing springs, and forces that make plants grow in some places rather than others. For Morten Pedersen (2013), *erdene* is anything valuable that comes from outside a given set of relations—in a process that Marissa Smith (2015) calls “accretion,” particularly in reference to *ovoo* worship.

*Erdene* is multiform and eternally reproducible, it can refer to herd animals, precious gemstones and metals, knowledge, and precious human persons such as children or lovers. *Erdene* is produced and accumulated by collaborative and friendly work across difference: through the social consumption of alcohol with foreign friends, or the speaking of another's national language. Proper relations with non-human “others”—including the Buddha, who Marissa Smith reminds us is not only a benevolent person who transcended his humanity but is also a foreigner of Indian origin —make outsiders into insiders while maintaining just enough distance.

Relational practices such as drinking, feasting, language-switching, and engaging in *ovoo* rituals (including mining) are both creative and dangerous—critical to maintaining access to eternally reproducible *erdene* valuables, which include future generations as well as material wealth, while also testing the integrity of the *nutag* community through relations with these outsiders (Smith 2015).

*Khishig* can be translated as "favor," "grace," "benefit," or "fortune," and indexes an element necessary for the growth of humans, animals, and other things. "*Khishig khürtekh*" is to accept, receive, or source an allotted portion of a shared fortune; "*khishig khuraah*" means to accumulate shares of fortune over time (Empson 2011). In Dariganga and elsewhere, practices of harnessing and accumulating shares of fortune generate luck, wealth, and prosperity. There are various ways to gather fortune from outside the family home to ensure increases in family members, livestock, and material goods (*erdene*). Important to this notion is an idea of inside-outside relations, their separations, and their movements. Fortune is a force that can be harnessed at particular moments, most significantly moments of extraction. Rebecca Empson describes practices that involve extracting parts of people, animals, and material items when they leave or separate from the *nutag*, and then tucking these into various places in the home. In the context of de-collectivization, market reforms, increase in foreign investment and privatization of property, and yes, mining, wealth differences between various households and communities have become more significant.

Just as practices like *ovoo* worship generate fortune by flirting with violation, so might mining. It goes without saying that the mining boom has generated a great deal of fortune for many Mongolians, and that much of this wealth is created through relations with foreign mining companies, mostly from Russia and China, but also Australia and Canada, as is the case with the largest mining projects in the country: Rio Tinto's Oyu Tolgoi and Tavan Tolgoi. However, mining also demands a sacrifice. Material extraction transforms the empty flatness of the Dariganga Nutag by poking holes in it, through desertification, extinction, toxic runoff, angry spirits, etc.

However, this tension also precedes mining. Even as poets attempt to sing the steppe into flatness, its verticality persists. Ancestral spirits and masters of the land accrete around *ovoos* and the ruins of monasteries burned down in the socialist era, histories borne by the oral literature necessitated by centuries of mobility (both forced and unforced) crisscross the landscape. In search of value, the earth is broken

and treasure erupts revealing the uncanniness, but also the longing, hidden within the peaceful steppe. Poetry, and long song in particular, attempts to smooth these disturbances, but it is always failing.

This constant failure should produce a dilemma for a sacred landscape determined by its unbroken flatness, and yet mines still have a place on it, marked by the equivocation of naming them after sacred mountains. The mining boom has produced a set of dilemmas for both rural and urban Mongolians as they attempt to reconcile an idea of “homeland” that is produced both by ecological wholeness and the production of treasure and fortune through relations. Thus, the ambivalence of mining in Mongolia is simultaneously ethical, political, economic, sacred, and cultural—full of both promise and danger. This ambivalence is visible through language, poetry, ritual, myths, and other “traditional” cultural forms that nevertheless are adaptable enough to incorporate the mine, a paragon of industrial modernity, into the very sacred landscape they produce in the first place. Much anthropological work on magic argues that magical practices such as witchcraft, sorcery, and spirit possession are used to mediate, control, or domesticate modernity or conversely, as for Nils Bubandt’s interlocutors in *The Empty Seashell* (2014), that modernity can be used to address the uncertainties and fears produced by magic.

One might argue for the magical agency of poetry in this scenario, especially as it is used to settle spiritual eruptions around the mine. However, for my interlocutors, the modernity brought about by the mine is not a rupture, but in fact has a historical precedent in the socialist era, and perhaps even to Mongolian imperial history. Neither as simple as a strategic corporate appeal to local cultural forms, nor a technique of local culture to domesticate the power of the mine, mining in Mongolia is instead somehow fitting within a longer history of how landscape has always been is materialized. It is not a rupture, but a stretch, a strategic equivocation, or a modification that draws upon traditions of how discourse materializes a more-than-material landscape in what appear to be new ways, but perhaps may not be.

My research hopes to find out the differences and particularities in the way *ovoo* practice materializes into *nutag* around mining sites as they fit within previously existing concepts of *khishig*, and *erdene*. By closely examining how these concepts are constructed and materialized as landscape, both within and outside the concept of mining, I hope to unsettle binaries that blind so much of the talk about climate change and the global Anthropocene to local, non-western, and nonsecular forms of

knowledge that don't rely on the very binaries (nature/culture, subject/object, human/environment, and I argue, nature/supernature and discourse/materiality) that allowed for the exploitation of the environment in the first place.

In Mongolia, poetry is a primary means of knowledge transmission and production, and is, therefore, essential to a nuanced understanding of local concerns and life worlds. Using poetics as a methodological route into an understanding of the ambivalence toward modernizing projects, I look at how Mongolian landscape poetry provides an entry to both theories of genre and a creative material production. I attend to the discursive possibilities provided by poetry, hoping to unsettle modernist impulses that separates the word from the world, and blinds us to the ways in which poetry is a creator of worlds: not only describing or mimicking landscape forms but physically making them.

Here I take up one of the primary considerations of this conference: the call for an exploration of “magical ecologies” of non-humans as a way of answering questions about how we might talk about the Anthropocene. I argue that the Dariganga Nutag might be one of these magical ecologies, and also might provide an example for thinking through the problems of the anthropocene while also being attentive to local knowledges and reflexive about the place of anthropology in a ruined world. I suggest that anthropology “after nature” (Purdy 2015) need not abandon its original concerns: it has always been interested in questions of “the supernatural.” However, I do think that an attention to how these more-than-human epistemologies are theorized locally might help us figure out how to understand not only “immortality in an age of extinction” but also a world beyond the real and perhaps beyond the material as well.

## REFERENCES

- Atwood, Christopher Pratt. 2004. *Encyclopedia of Mongolia and the Mongol Empire*. New York: Facts on file.
- Bubandt, Nils. 2015. *The Empty Seashell: Witchcraft and Doubt on an Indonesian Island*. Ithaca: Cornell University Press.
- Empson, Rebecca. 2011. *Harnessing Fortune*. Oxford: Oxford University Press
- Humphrey, Caroline. 1996. *Shamans and Elders: Experience, Knowledge and Power Among the Daur Mongols*. Oxford: Oxford University Press.
- Pedersen, Morten Axel. 2013. Islands of Nature: Insular Objects and Frozen Spirits in Northern Mongolia. In *Anthropology and Nature*. Kirsten Hastrup, ed. London: Routledge: pp. 106-117.
- Purdy, Jedediah. 2015. *After Nature: A Politics for the Anthropocene*. Cambridge: Harvard University Press.
- Smith, Marissa Jo. 2015. "Treasure Underfoot and Far Away: Mining, Foreignness, and Friendship in Contemporary Mongolia." PhD dissertation. Princeton University.



VICTOR COVA

# NONSECULAR REGRETS FOR INFRASTRUCTURE IN THE ECUADOREAN AMAZON

In this paper I tell the same story three times in order to open up a path for nonsecular critique.

## INFRASTRUCTURE

In 1969, evangelical missionaries decided to build a hydro-electric power station in the Ecuadorian Amazon in order to let their radio station broadcast continuously<sup>1</sup>. The radio station had been created a few years prior to evangelize Shuar, Achuar and settlers. It was initially powered by a fuel generator, but this was too costly to run around the clock. The missionaries needed to broadcast continuously in order to fight off another radio station in Peru that was using the same frequency. As a result of a shift away from hydro-electric generators in North America in the 1950s and 1960s, the missionaries could buy a disused one for cheaper than they expected. Christian unions made it possible to transport this massive piece of equipment first to the Pacific Ocean, then to Guayaquil by boat, and to the highlands on a truck. But no road existed to Macuma and the last stretch of the trip required a plane. On the last back and forth trip between the airbase and Macuma, the plane erupted in flames and its carcass remained in Macuma until recently. A small concrete canal was dug into the side of the Macuma river and into the powerplant. A few weeks later, a flood dug the riverbed by around 15 cm. As a result, not enough water would reach the plant to produce electricity, except in cases of heavy rain. The missionaries would spend the following 40 years looking for a solution.

In 2011, a road was finally being built to Macuma. This was no less of an epic engineering feat, because Macuma lies on the other side of a small mountain range, the Cordillera del Cutucu, from the main pan-American highway and from Macas, the Provincial capital. A first stretch of the road was built in the 1980s up to the estate of the *prefecto*, near the top of the mountain range. 60km of road construction remained, down the mountain, across the small hills and rapid rivers that are typical

---

<sup>1</sup> For more details, see Drown 2002 and Cova 2015

of the upper Amazon, and through the mud and secondary forest. Much of the forest had already been degraded in the 1960s when the State made land titles conditional on agricultural exploitation, and specifically on cattle ranching. Shuar, with the help of evangelical and catholic missionaries, obtained cattle and collective land titles, then formed political organizations to manage both. They settled in semi-permanent villages and cleared some land for cattle to graze. The population grew, hunting and fishing increased, which led to a steep decrease in the availability of game and an even deeper integration in the capitalist market economy. Shuar demanded easier access to schools and hospitals. The federations of cattle ranchers became political federation fighting for land rights, and the basis for the indigenous political party, Pachakutik. A Shuar man won the provincial elections in 2008 with this party and launched the road building works to Macuma and further to Taisha.

#### (SUPER)NATURE

I purified the accounts I just gave of all references to the so-called “supernatural” and provided you with secularized versions. What happens if I tell the same stories as my informants told them to me?

For the missionaries, it is God who moved the hydro-electric power-station from Ohio to Ecuador. They described how each moment of that trajectory happened out of chance encounters, surprising changes of heart, and the devotion of the faithful. The location of the disused plant was revealed by an acquaintance of the missionary, as an answer to his prayers. The plant was hauled off the waters thanks to a Christian union of construction workers moved by God, again as an answer to prayers. The shipping cost much less than it normally would, because the president of the shipping company was a Christian. Parts of that trajectory were clearly taking place in the world, that is, in the world conquered provisionally by death. The difficulties arose precisely in unconverted territory, for the transportation of the plant to Amazonia from the highlands. There, the owners of the plane company could not be persuaded, and the pilots would not listen to the missionaries, leading to the explosion of the plane. Yet obstacles and destruction were ultimately folded into God’s plan, as the insurance compensated the plane company for a plane they had wanted to get rid of, leading them to reducing the shipping costs for the missionaries. Spare electronic parts from the plane served to improve the radio and the power

plant. This made the lowering of the riverbed even more puzzling: why would God destroy what he had helped to build?

Before I return to this question, I turn to the way Shuar related to road construction. A Shuar man I met had accepted to let heavy machinery destroy a waterfall on his land that housed a spirit of great power in order to build a road. By the “powerful waterfall” he was alluding to the presence of an Arutam. Arutam can be conceived of as the spirit of a dead warrior, a divinatory spirit, an even, or as pure existential power<sup>2</sup>. To encounter an Arutam, one takes hallucinogenics near specific waterfalls, though when one has made such an encounter it is prohibited to mention them. Accordingly, knowing where Arutam-bearing waterfall reside and how to access them results from personal knowledge that can only be transmitted in specific ways. Powerful waterfalls are also marked by the presence of giant boas, the most powerful water animal for Shuar. Encounters with Arutam result in intensified strength, charisma, beauty, and ability to build a big house, bear many children, produce a lot of food, and kill many enemies. In other words, it intensifies one's power to kill and to provide for one's kin (which is the meaning of the word “Shuar”). The association of Arutam with divination, violent death and revenge warfare have resulted in the association with the devil among evangelicals, whilst the intensification of existence and capabilities and the numinous nature of the encounter have led catholics to identify it with God.

## REGRETS

It might therefore appear that the main problem we face when discussing these transformations of the landscape are problems of translation: how to make the “secular” narrative, the Christian one, and the Shuar one, coherent with each other? How to decide between them? Is Arutam the same as God? Is it the Devil? Is it something else entirely? Before we do, I want to return to what both the missionaries and the Shuar man in my narrative share, regrets, and how these regrets profoundly transform the problem at hand.

The Shuar man I spoke to regretted letting the Province destroy this waterfall. The decision he made was not an individual one. His land was allocated to his family by the community which collectively owns the land, and manages it as part of the

---

<sup>2</sup> For more on Arutam vision quests, see Taylor 2003, Rubenstein 2012, and Mader 1999

political federation. In turn, the federation chose Chumpi as a candidate for the provincial elections and contributed to electing him with a political program that included the construction of the road. They had collectively wagered that an increased access to the market would enable them and their children to become stronger, to the point where Arutam quests might become irrelevant. Yet these promises hadn't been fulfilled. Instead, what was left of forest was being decimated, his family relied increasingly on the market for foodstuff, and there were rumours of headhunters kidnapping children to sell their organs. Faced with broken promises and danger for his kin, he now regretted the destruction of a trustworthy source of power. This was becoming increasingly important as relations to the State became increasingly hostile because of Shuar's refusal to allow Chinese mining and oil companies destroy their land. The hostilities had already led to the murder of a Shuar leader and the brutal arrests of many Shuar politicians and activists, and would soon lead to a further death. Many Shuar I met, whether Christian or not, interpreted this hostility within an apocalyptic framework. According to a popular reading of the Bible among the Shuar, indigenous Amazonians were the "Jews" mentioned in the book of Revelations, and the Amazonian nation-states were the nations that would exterminate them. Many were thus ready to fight the army and die.

The missionaries also came to regret bringing so much technology to Macuma. They thought they had brought too many things from the outside, too soon. Electricity, the radio station, electrical lights, a small tractor, then computers, now the internet. Of course, Shuar were often the first to bring in these things from the settler world, but the powerplant undoubtedly accelerated these transformations. Two unfortunate consequences concerned her: materialism and the disappearance of Shuar culture. They saw Shuar people become increasingly preoccupied with ways of finding and using money, through state-sponsored projects and involvement with the market through agricultural production and tourism. They also saw the increasing fascination Shuar people had with the possibility of endless easy money through mining and oil exploitation. This distracted even faithful members of the Church from the arduous work of Bible studying, preaching, and translating, at the same time as it threatened to destroy Shuar territory and increase their incorporation within national society. Converting the Shuar meant radically transforming their world, of course, but they had to remain Shuar. The missionaries

realized in the 1970s that they risked converting Shuar not to Christianity, but to America. Entangling Christianity within the Shuar world was also about disentangling it from the North American one. Technology risked dissolving the Shuar into a globalized world without cultural specificities. These concerns too make sense within an apocalyptic framework, for they see the conversion of the nations as a prelude to the end times. Environmental catastrophe might be a sign that it would soon be time, just as globalization and the rise of Islam across the world be a sign of the Antichrist.

Regrets acknowledge a gap between what we did and what we wanted to do, between practices and norms<sup>3</sup>. Acknowledging this gap enables us to recognize that we had originally misunderstood what it was we were doing, and what we wanted to do, and to arrive at a fuller, more complex understanding. The Shuar man realized that the market could not replace what Arutam brought, the missionaries that Christianity and America were different, then both returned to their commitment to continue pursuing them in better ways. In other words, not all critique takes the form of iconoclasm, and critique as the acknowledgement of the ineluctable fact that practices misrepresent norms and that norms misrepresent practices, is part and parcel of what it is to be human. This is simple and obvious enough. Yet some major ways in which anthropologists have approached the Anthropocene begin from a refusal of critique precisely in order to “include” in some abstract way non-naturalistic entities such as Gods and spirits.

## MYSTERIOUS WAYS

When I arrived in 2012, the missionaries were still working hard to fix and improve the hydro-electric powerplant. A Shuar team was in charge of the daily management of the plant, from cleaning the canal to repairing the lines. The plant also provided electricity to a dozen or so communities, and the Shuar management team also had to try to get them to pay for the service. The missionaries focused on the big repairs, which involved sourcing replacement pieces, making diagnostics when nothing worked, and trying to fix the riverbed. During an event I organized, around lunch, the missionaries met with Marcelino Chumpi, the head of the province. They liked

---

<sup>3</sup> Here I rely on Vincent Lloyd’s continuation of Gillian Rose’s non-supersessionist social philosophy. See Lloyd (2008, 2011)

his speeches encouraging entrepreneurship among Shuar now that the road was coming. They asked him if the machines used for road-building could help raise the river bed by moving some rocks and pebbles around, and the Prefecto agreed. The powerplant started working much more consistently from that moment on. The arrival of the road to Macuma also marked the possibility of getting electricity from the national grid, which most inhabitants took eagerly. The road brought metal collectors who bought what was left of the plane from the plane crash.

Yet they embed a logic that precludes such pluralism. The theological name of that logic is supersessionism, the doctrine (often now considered problematic by theologians) that the Christian alliance with a God of Love has utterly replace the Jewish alliance with a God of Law, a doctrine which grounds both anti-semitism and what will become modern racism<sup>4</sup>, as well as many variants of gnostic and antinomian heresies, which entice us to look for magical solutions instead of helping us attend to the mess we live in. In recent anthropological discourse about the Anthropocene, it has meant locating the origin of the Anthropocene in “modernity” as a senseless set of norms (particularly those of epistemology and Marxism) which could be redeemed by an entire new set of norms emerging immanently from practices themselves, whether those of Amazonian people or those of “really existing” Western people (scientists, law-makers, engineers, etc). A truly nonsecular investigation into the Anthropocene, instead of focusing primarily on the inclusion of supernatural entities, may want instead to take political theology seriously as a rational, critical discourse that reveals deleterious logic of supersessionism we may be tempted to adopt, and points the way towards nonsupersessionist ways of attending to the world.

---

<sup>4</sup> On race and supersessionism, see Boyarin, *The Unconverted Self: Jews, Indians and the Identity of Christian Europe* and Kameron Carter, *Race: A Theological Account*



## REFERENCES

- Boyarín, Jonathan. 2012. *The Unconverted Self: Jews, Indians and the Identity of Christian Europe*. Chicago: University of Chicago Press.
- Kameron Carter, J. 2008. *Race: A Theological Account*. Oxford: Oxford University Press.
- Lloyd, Vincent. 2011. *The Problem With Grace: Reconfiguring Political Theology*. Palo Alto, CA: Stanford University Press.
- . 2008. *Law and Transcendence: On the Unfinished Project of Gillian Rose*. Basingstoke: Palgrave Macmillan.
- Mader, Elke. 1999. *Metamorfosis Del Poder*. Quito: Editorial Abya Yala.
- Rubenstein, Steven Lee. 2012. "On the Importance of Visions Among the Amazonian Shuar." *Current Anthropology* 53, no. 1 (2012): pp. 39-79.
- Taylor, Anne Christine. 2003. "Les Masques De La Mémoire: Essai Sur La Fonction Des Peintures Corporelles Jivaro." *L'Homme* 165 (2003): pp. 223-48.

JOHN MORAN

FEELING LIFE FORCE:

Ecological Spirituality Among Settler Environmentalists in Florida

In the mid 1970s, the US Army Corps of Engineers wanted to build three dams on the Apalachicola, Florida's largest river, to provide stable navigation conditions and lure traffic onto the rarely navigated river, once a major artery in the slavery-fed global cotton trade. The basin was already dammed—the Apalachicola begins at a dam at the Florida-Georgia border, through the convergence of the heavily dammed Chattahoochee River (which is Atlanta's drinking water) with the Flint River—but from there the Apalachicola flows unobstructed for 270 kilometers to Apalachicola Bay, locally called the “last great bay” (when people say that, they mean, the planet's last bountiful major estuary).

At the Corps' public comment meeting soon referred to as the “Mariana bloodletting,” (not to be confused with the Civil War's Battle of Mariana), the Corps, with their insatiable addiction to damming and straightness, met the region's burgeoning environmental movement in a public meeting—the realm where science, law, and strangers meet, where the gods are lawyers and the magic substance is fact.

The biologist Skip Livingston, almost eighty and mourning for the Apalachicola Bay, Great Barrier Reef, and other systems that he, a Princeton educated former stock broker, worked in vain to preserve, recounted to me at his Tallahassee home, a seven-minute drive from where I grew up:

We were doing work on the Bay that showed that if they built a dam on that river, it would block the phosphorous coming down the river, and the food webs would go to hell in the Bay and we had good data with nutrient limitation work that we had done. It showed that it needed both phosphorous and nitrogen. At the time, the great nutrient limitation was mainly done with nitrogen, it was limiting, not phosphorous. But in our area the soils are low in phosphorous, so phosphorous is also limiting here. Anyway, to make a long story short the Corps came down and they had a series of talks that they gave

along the river, different towns along the river including Apalachicola in which they were trying to sell their dam. And of course everybody in Tallahassee was for it. More people, more money, all this stuff. So I got interested and I went to one of the meetings... and of course the Corps had all their experts there, and the Corps colonel was there, he was very impressive. They went through their little dog and pony show and then they asked for questions. So I stood up and started asking them these questions about the science... What about phosphorous, what would happen to phosphorous behind the dam? I have studies here that show that seventy, eighty percent of the phosphorous would be trapped behind the dam, be impounded. Oh yes, they said, that's true, but, um, nitrogen's limiting and therefore we don't worry about that. And then I whipped out my little report on nitrogen and phosphorous. Well, it embarrassed the Corps. They had probably never confronted an active scientist who was working on the system they wanted because dams have been all through the South, they've dammed every river in the South (Livingston 15.6.2016).

At the next meeting in Apalachicola, Skip continued:

I said to the Colonel that taken my publications, I have friends in various high places such as Natural Resource Defence Council, I have lawyer friends across the country who are willing to help you, and we'll sue the shit out of you if you try to build a dam on the river, and you're not gonna get it and you're gonna get a lot of bad publicity

Livingston, operating from a basement at Florida State University, where every year a delegation from the state legislature begged the President to fire him, said: "The data that I get are very powerful in a court of law. And when you get me together with a couple of lawyers who know what they're doing, if somebody's doing something wrong, we nailed them" (ibid.)

Steve Leitman co-authored the State of Florida's report opposing the proposed dams. Leitman, who grew up playing in the drainpipes of the tortured LA River, was a Peace Corps volunteer in West Africa and then lived on the Hickory Hill commune outside Tallahassee, told me:

The Corps of Engineers came in with their proposal to construct a dam on the river. I saw the proposal come in and I took it and said this one was assigned to me but actually no one had assigned anything to me but I figured if I had written my master's thesis [on dams]... I should be the one to do it, so I just sort of grabbed it. And my ex-wife, Helen Light and I ended up writing a seventy- eighty-page response letter to the project [critical of it] and had this very funny experience. We rather thought that we were in for a lot of trouble. So we wrote the letter and gave it to my bureau chief who just happened to be about to leave on vacation and he didn't want to take the time to read it, so he signed it okay figuring it would get looked at a division level closely, so it passed through the bureau without anyone reading it. At the division level, he signed off on it, figuring, Chuck signed off on it, it must be good, and he never read it, and it went to the Secretary's office who said Chuck and John signed off on it, this must be good. So our seventy-page letter went out to the Corps with no one having read it at DEP. And we're both going, uh-oh, we're in trouble... And the Corps of Engineers got the letter and withdrew the permit and dropped the project. And so that was it's kind of like trying to knock down a big old wall, and you lean against it and it falls, it's really not what I expected, to be honest. But it kind of gave us the reputation as the dam slayers (Leitman 4.1.2017).

In both cases, Livingston and Leitman slayed the dam through scientific and legal idioms. Both feel deeply for the river, but religious, spiritual, and otherwise personal motivation for scientific environmentalism was set aside in the process of deliberation, just as it is set aside today. Asked about whether he had traveled the length of the river, Livingston told me:

It was just me and some graduate students and we thought that we should have a more hands-on knowledge of the river so we'd start right at the top where the dam is and we'd go down the river in canoes. It was a religious experience for me. It was a major river with virtually no development on it. We had knocked off and bought up all of the agricultural land, so there was no agriculture. There was virtually

nothing but marshes and swamps and natural rivers and streams and we of course go up into some of the tributaries and so on, it was an alluvial system. Of course, the main part of the system was in Georgia, in the Chattahoochee and Flint, but the river itself was in primeval state. Primeval state. Not just a primitive state, but a primeval state, in that there was literally no development anywhere. Most of the people who were on the river were either fishing or doing things like that, beekeeping and you know, I mentioned getting worms and stuff. But the river itself smelled different. It's hard to explain. But it was, the only problem we had was sometimes when we were close to the shore, snakes would drop into the canoe. We had cottonmouth snakes drop into the canoe (Livingston 15.06.2016).

He continued telling snake stories. Then I asked him to explain what he meant by the phrase religious experience. The biologist confessed:

I know this is very unscientific, but in those days, in the seventies anyway, the river and the bay was like a living thing. Wasn't just, how shall I say it? It wasn't just a big runway of water, it was home to thousands of species of animals and plants, in a way that had been untouched by human beings, coming from New Jersey and New York City, I can tell you that was quite an experience... These were areas where you could feel the life that was in them. It's hard to describe, actually. But you could feel the life. It was worth preserving. I should say one other thing, when I was in college, I went with one of my friends out to California and we worked as farmhands on a ranch in Yuba City, which is a town close to the capital, and I worked for a summer hoeing beans and driving tractors and stuff. But the people I worked with were Mexicans who would come from Mexico, and a group of Indians called Digger Indians, the Diggers were from a tribe who had once been a dominant group of people before the white man came, the whites came and killed them off...

Livingston spoke of discrimination against the Diggers continued to discuss how "here were people who were dependent on all these natural systems at one time, and the white came in and not only discriminated and killed them, but wiped out their

systems, which we did,” and he went on to explain how he had taught aquatic ecology classes to Native Americans using his own money. (I don’t have space to go into racism and settler environmentalism in this paper but I do address that elsewhere). He concluded by telling me:

I appealed to their [Native peoples] level of worship, not worship but of, listening with the natural resources, the natural systems. Much more so than the European attitude of dominance. So, I sort of adhered to an Indian philosophy, you might call it.

Asked about the core beliefs that motivated his work, he continued:

I feel for natural life. I feel that it’s important to have natural life. I belong to the Native American beliefs along those lines. If I have beliefs they’re along those lines. I’m not an atheist but I don’t believe a loving God would be very happy with what we’re doing with his creation [laughing]. And that might sound a little metaphysical but the bottom line is I’ve devoted my life to that... I’m discouraged because politically speaking I’ve never seen such a vast wasteland as I’ve ever seen today. It’s so beyond anything you can think of and it’s so beyond anything you can fight. This business of Apalachicola is simply symptomatic of a much more or bigger problem. Where you have the environmentalists saying stop Georgia and everything’s alright. And you have the very people who are the politicians killing the environment saying there is no such thing as climate change, don’t worry about that. Think about that. It’s so against reason. You don’t even have to be metaphysical. You can say this is really dumb. How dumb you can get... Here we had this wonderful, gorgeous system that was producing so much for humans and that was still left alone, and all of the sudden despite all of our efforts, and I mean a lot of efforts, we’ve spent two-hundred eighty something million just buying land, that’s a lot of money, a quarter billion dollars or more, despite all that, we lost the system.

Livingston’s argument is that the Bay, whose native eastern oyster reefs suffered repeated fishery failures in the beginning of this decade, is the present and future victim of climate change through droughts in Georgia, combined with growing water



impoundment from Atlanta's growth. Lower the freshwater inflows increases the salinity of the bay and less flooding equals less nutrients.

But Livingston did not go around writing op-eds titled, "Endangered Apalachicola River: The River Smells Different. You Can't Explain It." Instead across his career he has participated in lawsuits, using data, including a recent mercury remediation on the Shenandoah. Besides being critical of the Corps, both Livingston and Leitman had another target for their criticism—people like my friends and I: the Apalachicola Riverkeepers, many of whom, like Livingston, are white settlers who claim to adhere to Native American belief systems and whose relation to the river is ontologically otherwise, but who struggle, without scientific expertise, to have our claims heeded.

I was not surprised by Livingston's "unscientific" claim that the "river and the bay was like a living thing." Feeling or sensing life in something other than a scientifically recognized biological individual or population seemed part of what my friends Doug and Lynne talked about when they discussed "life force." I met them while participating in a five-day, four-night kayak camping fundraiser trip on the Apalachicola River in October 2015 to support the Apalachicola Riverkeeper. Decades after the first canoe paddles of Livingston and Leitman (who I spoke of in the opening), we were the very folks they criticize as ineffective—image-obsessed raisers of "awareness" rather than dutiful technocrats.

Among those white, upper-middle class participants, a specific mode of connecting with nature—feeling life force—was present. In exploring "feeling life force," I hope this specific, contingent expression of the connection concept will tell us something about "connection," ubiquitous word that I don't think we have a genealogy of. Bron Taylor's monograph on ecological spirituality is replete with the word connection (Taylor 2010). But in Taylor's excellent work, the flexibility of "connection" or the assumption that you know what it is, leaves it taken for granted: What is it to connect? What is being connecting? Is it love?

#### BELIEF IN LIFE FORCE AMONG APALACHICOLA RIVERTREK PARTICIPANTS

The influence, pervasiveness, and persistence of the "life force" concept is due in part, like "connection" it's ambiguity, flexibility, and emptiness. Ultimately, "feeling life force" like "connection" is a form of universalist politics.

When I paddled with them for five days along the river, all three of us meeting each other for the first time, Lynne and Doug's New Age proclivities proved mundane. They were sensitive to the aesthetic experience of being on the river; we gathered in a circle on an island in the river while Doug taught us some tai chi; as we paddled Lynne recounted an ayahuasca journey.

Sitting by the sweat lodge on his property south of Tallahassee, a stone's throw from the house he had constructed himself, Doug Alderson, who describes himself as "following more of a Native American belief system, specifically Muscogee Creek," responded to my question of his experiences with the ceremonies of the Native American Church, when he was being trained by the spiritual leader Bear Heart. He said:

That experience definitely deepened my awareness of nature and land, because if you realize how many thousands of years Native Americans have been on this land and their essence is still there, that just doesn't go away just because the people are gone. So you feel that, stronger in certain places, and you kind of know it when you get there. It could be a very pure place, or it could be a temple mound you find, or something like that. So it's definitely things are more alive. I understand a little more of the energy involved, it's still a mystery to me, I believe there are spiritual beings that help out sometimes, you have to respect those people, those beings. Some of those beings could be like, they call little people. They're different sizes. They're almost like the Leprechauns from the Irish culture, but the Native Americans in the Southeast at least, they know about these people, and they do help out medicine people, and they're kind of in charge of the plant kingdom. So there's things out there we don't always see. Sometimes we can feel them. It's a little deeper than just walking in the woods and saying, oh, that's pretty. If you go up to certain trees—this is sounding kinda strange—but if you kind of put their hands on them and feel the essence of that life force. And sometimes those trees will start talking to you in a way that you understand. They're kind of a conduit for spiritual energy. They're a living being. So if more people tuned into that, they would feel less likely just to cut a tree without thinking. It doesn't mean we can't cut things or use things, it just

means we have a little more consciousness about that. We tune in a little bit more with that being, if we have to cut that tree, say, thank you, and this is what I'm using you for, firewood or wood or whatever... But I usually leave an offering of tobacco and a little prayer and state my intentions... But even near my work, there's this tree on the nature trail, and I touch that tree sometimes and I can go off to different worlds almost, different parts of the planet. It's just the conduit. I was with a friend one time and I was just curious what he would think, he had a sore back and everything. I said, go over there and put your hands on that tree and tell me what you think. I didn't tell him anything about it. He put his hands on it, he said, oh my god, he felt it. It was just buzzing to him. He said, I don't think I need to go to a doctor anymore for this back if I keep doing this. So he got some benefit out of it, which I thought was interesting... [he continued] Every river has a unique history, every river is kind of unique, has a different look to it, has creatures that are unique only to that river system. And, but when I go on some of these rivers around here especially, a lot of times these rivers have nobody living on the river... But if you kind of know that history you can feel that human presence. Obviously, I feel the Native American presence because they were here the longest. Ten to fifteen thousand years or more, a lot of these places. They lived on these rivers, the rivers were the transportation corridors for the most part, places they could travel and they could fish and hunt and all the creatures that live on the river are all tied in with this spiritual force of the river itself. All the birds and the fish and the otters and the manatees, they're all kind of connected to this system that to me is kind of alive, this water body. So I kind of view the—I don't know all the answers, it's still kind of a mystery, so I like, one term Native Americans give to the god or creator they call it The Great Mystery. To me it's The Great Mystery, it's like a life force. It can manifest itself in lots of forms. You can feel it in a tree or in an animal or just standing out there greeting a sunrise. There's all kinds of ways to do it. But I think it's contained in just about everything around us. And to me that type of philosophy helps to promote respect for the

planet. If we had more of this respect, we'd probably treat the Earth better for the most part (Alderson 12.12.2015).

Another trekker, Lynne Buchanan, a former art agent and banker, thrice-divorced and a mother of two, described her growing belief that “divinity is within nature on this planet” as Thich Nhat Hanh suggests in *Love Letter to the Earth*. At the new age Wake Up Festival in Colorado, Lynne had a transformative experience after kirtan:

And I was walking through there, and I've read all these studies about plants, and people walking near them, and I would put my hand near a plant, and it would like totally move, and take it away, and it would stop, and put it back. It was just, like, this connection in nature that was so strong and this energy level, which is really a lot like physics. So we think it's kind of like weird and crazy, but when you actually study physics that's what it is, it's this interconnectedness between everything and this energy, without the boundaries. So I think, one thing that going deep into the wilderness does, is that it allows us to access those ways of connecting that are more common in animals that don't have overdeveloped brains that separate them from nature (Buchanan 3.4.2016).

Lynne later said when she looks at something in nature: “I'm grateful and appreciating what I'm looking at and what's there and life and this force and that's really like what we have.” (ibid.)

I want to dismiss the idea that Doug and Lynn's force is the life force of vitalism; they are not trying to explain a force driving cell division. Rather, this animistic sense separates the category of living things from liveliness, allowing life to be felt in different gradients across living and nonliving entities. If I may venture, this life force is the quality of life present in affective encounters, and which for both Doug and Lynne sometimes they believe to have powers associated with a divine, like healing powers.

How “life force” is similar and different to the nature concept, especially nature as the divine manifest in everything (transcendentalism's indwelling god who unifies all creation), during its different historical manifestations is such a challenging task

that some of the magic in my paper is going to be to set that aside. How “life force” is different from “life” is another vexing question.

Scholars know quite a bit about what percentages of people in different places believe in a life force—because “Do you believe in a spirit or life force?” is a standard question on public opinion surveys about religious identification. Since 1947 when Gallup polling began, “spirit or life force” has been that sweet, vague spot between professing faith in an Abrahamic god, and not. In 2010, 47% of Danish citizens, for example, told the European Commission that they “believe in some sort of spirit or life force” (European Commission 2010). So sociologically, belief in a life force is the most common religious belief in Denmark, far outpacing belief in the Abrahamic God or atheism/agnosticism.

Out of curiosity I included the Gallup language in a written survey emailed to my RiverTrek friends; the survey was necessary because in recorded interviews I had often danced around the big question: what are your religious/spiritual beliefs?

Those that hold ecological spiritualist beliefs, which is many environmentalists (and in this particular case beliefs about a life force) exist in a closet of sorts. There’s a political price that a visible group like the Apalachicola Riverkeeper would pay if they were accused of being hippies or atheists or pagans, just like if any of those insults were leveled at a Congressperson. The survey first asked Trekkers to qualitatively describe their beliefs and then asked the Gallup question of marking X for belief in a personal god, or in a spirit or life force, or don’t know what to think, or don’t think there is any of those. Even though she had already been given the opportunity to write in detail, one friend chose not to check any box and instead wrote, excerpt: “God” [in quotes] is expressed in the intricate and complex order of nature.” This is a reconciliatory evasion of confessing one’s non-Christianity in an Abrahamo-normative society, where it’s okay to not be Christian as long as you don’t make a show of it and you can “pass.”

They are not responsible for expressing whether or not they hold theistic beliefs, and if so, what type, and as a result they don’t have to carry a coherent belief system, or put it up to scrutiny.

The task of surveying everywhere the term “life force” crops up is unaccomplished and monumental. I was alerted to one discussion in anthropology where Rodney Needham argued against explanations that heads in head hunting [among the Kenyah of Borneo] were repositories of “soul substance” or “life energy”

(Needham 1976). This work was building on terms to describe animism by Kruyt, a Dutch ethnographer at the turn of the twentieth century who used the term “life force” among others (haven’t gone there yet). Needham argued that when, to the ethnographer Elshout’s surprise, the Kenyah could tell him nothing about the conceptual foundations of head hunting, “this was because there was really nothing further to tell. The taking of heads secured well-being and that was that.” Anthropologists were “interpolating a fictitious entity between the cause and effect,” trying to “to isolate the mysterious factor x. The solution was found in the postulation of a medium of mystical energy such as ‘soul-substance,’ ‘life-force,’ ‘life-fertilizer,’ etc.” (ibid.). Needham argued the terms he criticized, including life force, “belong to a scientific idiom derived from physics... they were adduced by the ethnographers because certain effects had to be causally accounted for” and he goes on to suggest that the language of nineteenth-century physics is perhaps unduly influencing sociological explanation.

Were my informants using the idiom of physics to explain their affective encounters with life? Was talk of life force exactly that—talk; explanations offered only because they were sought? I am doubtful that something like “feeling life force” will ever be explained very well; but does a secular, techno-scientific society claim everything may be explained?

When the practice of being in an area of concentrated diverse life is explained as “feeling life force”, the feelings, like a collective effervescence, are being put to an end of connecting with all of life or the planet rather than just what’s in front of you; the “force” is not just a casual explanatory x in a physical idiom, but also a universalization (and so, drawing from the idiom of the laws of nature, it emphasizes the universality of physics; but this is a political universality). To say that the affective encounter you are having is not just with the tree in front of you but with all life, or some essence you posit that all life contains, is a political and religious claim (echoing accessing god through universal nature). The rub of life force, really, is a universally inherent category, that uses a mysterious x to explain an inherent sameness, that draws on the valorization of life but tries sometimes to extend that to nonhumans, too.

In both Livingston and Doug’s descriptions, the river is “kind of alive” or “like a living thing.” This Gaian-tinged description was, they made clear, foremost a



description of what it felt like: the feeling of being in a place with so much life, one wants a name for the collectivity.

When universalism is a main charge against the Anthropocene concept—its creation of an anthropos rather than a more carefully pointed finger of a Capitalocene or Raciocene—it's doubtful a politics of sameness will have much purchase in the corner of the academy I labor in.

## TOWARD SECULAR TESTIMONY OF SPIRITUAL VALUE

Limited from the public decision-making process by our lack of expertise, and in solidarity with the Bay's oysterfolk, whose cultural heritage and livelihood has depended on the Bay for generations, the state neglects the spiritual value of the river, and thus our diverse but united cultural and religious values, in management of the system.

My collaborator on this paper, Robin, first told me at Pepper's, a Mexican chain restaurant in Tallahassee, during an organizational meeting for the RiverTrek, that the River and Bay were her Church. She later joked that I would be one of her apostles. Several of the folks I paddled the length of this river with on a kayak camping fundraiser for the Apalachicola Riverkeeper have begun a Facebook group, The Church of the Double-Sided Paddle. For the nature writer Susan Cerulean, it helps that the local islands were named by Spanish conquistadors for saints: she says her church is the church of St. Vincent (island), the church of St. George, the church of St. Marks.

We connected on the Apalachicola. On a sandbar, Robin saw me reading *Zen in a Wild Country: Solo Wilderness Meditation* by the late Anne Rudloe, a leading regional biologist whose biological supply company and aquarium I'd been volunteering at ethnographically (her Buddhism was a local cause for consternation).

"What a tribute to her," Robin said, smiling deeply. She raised her hands to gesture around at the Apalachicola and the sandbar and the flock of cattle egrets (which someone noted came to Florida from Africa in the 1940s) sweeping past the sunset, "She's here."

The seed of this paper was not that invocation of ancestors dwelling in the landscape, but rather a hyperlink-stuffed email Robin sent to me in summer of 2016, filled with many links. Robin had helped the last two anthropologists who had rolled

through Apalachicola, neither of whom had finished an ethnographic dissertation, and she alerted me to the biologist Livingston.

One link was to a newspaper article, “APALACHICOLA PLAN COULD HARM AREA MARINE LIFE,” she had found on the Google News Archive.

“It’s ironic to me that this article concludes with some of the same sentiments we have been expressing,” Robin typed.

Speaking of the mid-70s Corps plan to dam the river, Dan Dunford, the director of the Bureau of Environmental Protection said: “The spiritual aspect of the Apalachicola valley probably is the most important value of the watershed.” The article continued: “Explaining such values within the parameters of engineering and legislative analysis of cost benefit ratios, however, is ‘like trying to explain color to a blind man,’ said Ann Rudloe of Panacea.”

Robin also expressed shock in her email to me, “Can you imagine such a quote from any of our state officials, let alone the FWC or DEP (guess they were together back then) making such a statement re: spiritual values today?”

Robin was expressing shock that a senior state official might speak publicly of the “spiritual value” of a river, not just because professionalism would forbid such an utterance today, but also because this shock was part of a much more common experience among environmentalists in Florida—nostalgia for moral character in an era when Governor Rick Scott, the proto-Trump, is perceived as an evil, terrible human being (basically everyone I talk about in this paper was raised a Presbyterian, and you know you have God’s divinity expressed in nature as one inheritance of that, and the other is this world of pervasive moral depravity—actually, I think there would be much to merit a Presbyterian Anthropocene [as descriptor and aspiration]). Many environmentalists I have met in Florida believe their state administrators to be evil, and express deep anger toward this evil. It pains them that one of the polities at the forefront of the global environmental movement—Florida—is now at the forefront of a different movement to dismantle environmental protection.

Highlighting the spiritual value of the river is a moral condemnation of one’s political opponents (this is an old move—the Hetch Hetchy is a temple), and there’s a claim-making that is grounded in connection. Where does spiritual value, or say, nonsecular value, find its place in the legal system? The river is sacred to some—

does it matter? I learned about this as the Army Corps of Engineer worked to revise the 800-page Environmental Impact Statement for their Water Control Manual.

The meeting was held in the Apalachicola National Estuarine Research Reserve, which might not be here next year, because it's not enough to murder our estuaries, Trump wants to murder our estuarine education system, too.

The Corps has smarted up since that public comment meeting in the 70s—there's no longer a public question and answer session where an ornery scientist can tear you down. Instead, the format is you go to whatever table you like, and ask questions of the experts for that specific topic (like science fair for bureaucrats).

At the meeting of experts, I was searching for my area of expertise.

Environmental justice, was, to my chagrin, under the purview of the economist. She gathers data on where racial minorities live in the Basin from the decennial Census. Any legal compliance for social and political issues is reviewed by the environmental lawyer.

I fled to "Cultural Resources," but that did not include any contemporary use of the river and bay; the professional had a mandate to work from the Archaeological Resources Protection Act of 1979; an amendment of the Antiquities Act of 1906. The closest thing to assessment of psychological, spiritual, or cultural value is for my interlocutors is an assessment that scenic viewpoints would not be harmed.

In my mind, I began writing the comment I would eventually submit to the Corps, where I wrote, "My assessment is that the draft EIS undervalues the cultural and socio-economic significance of the Bay and its dependency on water flow. By treating the oystermen of Eastpoint and Apalachicola as solely a commercial fishery, rather than attempting to assess the historic, cultural claims to water flow by multi-generational oystermen in Eastpoint, this statement does little to recognize a marginalized population's unique and rare dependency on an environmental resource... The need of their community for a functioning estuary must be considered and assessed through an environmental justice framework using quantitative and qualitative data at the municipal, rather than regional, level." I received no response to this comment, in which I was wielding my expertise in a way where my politics outweighed my data. A year later, in the *Florida v. Georgia* case, Georgia challenged the validity of a social scientist who testified. The fact that any sort of spiritual or cultural value gets framed beneath recreational value is part of why there's an interesting trend in Florida of old hippies, like Robin, starting

ecotourism businesses, which frankly don't have many customers, in part because it gives validity to their arguments if you can say "I'm a business owner." (We should all incorporate our ethnographic research ventures as limited liability corporations).

I was trying to articulate with the law. Even the reason we have the minimum flow on the river, 5000 cfs, is from litigation to comply with the Endangered Species Act to protect freshwater mussel species along the river. Thank the nonsecular something for the purple bankclimber. Even though the oystering culture is widely recognized as a distinctive culture, and way of life, even though we could parade about the psychological benefits of the river, (not being a lawyer) cultural injury is not a very powerful legal mechanism for getting water flow increased, especially if your difference is not recognized by the state.

Having journeyed longer as Robin's apostle, I'll come out of the Abrahamo-normative closet with a different, draft, not-yet-properly-substantiated public comment:

The Apalachicola River and Bay is a "living whole," and has long been recognized variously as a living force, a spiritual force, and a living thing by citizens who study, labor, worship, and recreate on it. The River and Bay should be declared a legal person, the same as the Whanganui, Ganges, Yamuna, Atrato—not different.

This is my expert testimony; I offer up my holy data, hoping lawyer gods will listen.

## REFERENCES

- Alderson, Doug. Oral history interview with John Moran, Naturalists of the Big Bend Oral History Collection 004, December 12, 2015, Samuel Proctor Oral History Program Collection, P.K. Yonge Library of Florida History, University of Florida.
- Buchanan, Lynne. Oral history interview with John Moran, Naturalists of the Big Bend Oral History Collection 010, April 3, 2016, Samuel Proctor Oral History Program Collection, P.K. Yonge Library of Florida History, University of Florida.
- European Commission, "Special Eurobarometer: Biotechnology Report". 2010. [http://ec.europa.eu/commfrontoffice/publicopinion/archives/ebs/ebs\\_341\\_en.pdf](http://ec.europa.eu/commfrontoffice/publicopinion/archives/ebs/ebs_341_en.pdf)
- Leitman, Steven. Oral history interview with John Moran, Naturalists of the Big Bend Oral History Collection 036, January 4, 2017, Samuel Proctor Oral History Program Collection, P.K. Yonge Library of Florida History, University of Florida.
- Livingston, Robert. Oral history interview with John Moran, Naturalists of the Big Bend Oral History Collection 024, June 15, 2016, Samuel Proctor Oral History Program Collection, P.K. Yonge Library of Florida History, University of Florida.
- Needham, Rodney. "Skulls and causality." *Man* 11, no. 1 (1976): pp. 71-88.
- Taylor, Bron Raymond. 2010. *Dark green religion: Nature spirituality and the planetary future*. Berkeley: University of California Press.

SAMANTHA HURN

# FROM THE HORSE'S MOUTH?

## Hearing nonhuman voices in the Anthropocene

This paper is a tidied-up version of the presentation which opened an outstanding programme of speakers and talks given at the 'Nonsecular Anthropocene' conference, held in the atmospheric and eminently appropriate venue, Koncertkirken, a former Protestant church in the heart of Copenhagen. In the paper, I wanted to take the opportunity to present some ideas which have been laying dormant for a while, but which I hoped might resonate with attendees and other speakers, and hopefully lead to some productive discussion.

Themes relating to a nonsecular Anthropocene have featured in various and sometimes surprising ways in the different strands of my research to date, and reveal how nonsecular encounters with diverse beings and entities, as well as diverse cultural practices, have informed my personal as well as professional journey as an anthropologist and anthrozoologist concerned with the ethical implications of trans-species interactions. So, in what follows, I will attempt to weave together fieldwork vignettes, theoretical analysis and reflexive biographical narrative with some speculation on future research directions and potentially novel ways of 'becoming with' other-than-human beings and entities in the Anthropocene which, following Haraway (2015, 2016), do not prioritise the human, and which transcend the limits of a secular ontology.

In my recent book *Anthropology and Cryptozoology* (Hurn 2016) I touched on several of the questions the conference, and subsequently this volume, sought to ask, including (and I am now quoting from the conference abstract): 'What place do spirits, gods, ghouls, and ghosts occupy in the Anthropocene? What spirit ecologies haunt the "naturecultures" of anthropogenic environmental crisis at the limits of capitalist expansion? ... [and] how might anthropology retool itself to study "the supernatural" in a world after nature or to better understand immortality in an age of extinction?'

While I hadn't intended for my book to provide any answers to these questions, the various contributors all addressed them in some way or another. In terms of what



might be termed ‘spirit ecologies’ for example, Martin Walsh and Hele Goldman’s (2016) chapter on the Zanzibar leopard (*Panthera pardus adersi*) demonstrated how, despite being classified as extinct by the international scientific community, the animal is still widely believed to exist by Zanzibaris, both as a zoological species and as a witches’ familiar. Mike Heneise’s (2016) chapter also explored the apparent contradiction between scientific and folk knowledge in Nagaland where recent scientific research on tiger populations in northeastern India has suggested that while tiger populations have been documented in neighbouring Assam, Arunachal Pradesh and Meghalaya, according to the National Tiger Conservation Authority (NTCA), there have been no official sightings of tigers in Nagaland prior to 2015 (Jhala et al. 2015). Heneise’s informants however, regularly saw tigers in the form of Naga tiger men or were-tigers.

Perhaps surprisingly, in some of the cases described in the book and in the current collection, and relevant given the wonderful location for the conference, the church has played an important role in keeping cryptids alive. In Sharon Merz’s (2016) chapter for example, the church allows for a syncretic fusion of local beliefs in creatures described as bush dwarves or *siyawesi* with Christian teachings. For the Bebelibe of Benin, *siyawesi* are traditionally viewed as benevolent beings who introduced Bebelibe ancestors to agriculture. However, in the context of widespread conversion to Christianity, *siyawesi* become synonymous with the devil in the local form of *Disenopode*, and in the process their role in local cosmology shifts from facilitating human civilization at the community level to destructive malevolence at the individual level (causing illness, death and other types of misfortune) – characteristics shared with other capricious cryptids such as Mami Wata discussed in Bettina Schmidt’s (2016) chapter, who intervene in the lives and fates of mortals who cross their paths and who therefore command a healthy respect or on occasion, fear. Indeed, the demonization of liminal beings such as *siyawesi* (Merz) and mermaids (Schmidt) who are seen as dangerous (and at times specifically satanic) is also instructive, and both *chono* (wolf people) in Mongolia discussed by Mette High (2016) and Merz’s *siyawesi* are divine messengers, sent to try to instill (or regain) order or to act as mediators between humans and the nonhuman realm.

Perceptions of *siyawesi* amongst individual Bebelibe as discussed by Merz are also inextricably linked to post-colonial modernity, the concomitant exposure to capitalistic ideals of materialism, individuality and, again (and most significantly), a

shift away from traditional values and practices. Schmidt too notes that mermaids, and specifically Mami Wata, have become increasingly popular in post-colonial contexts of socio-cultural and economic flux, mass communication and increased mobility.

Gregory Forth's (2016) chapter is a perfect example of the sort of cryptozoology which Heuvelmans (1988) had in mind when he coined the term. For Heuvelmans, cryptozoology was '[t]he scientific study of hidden animals, i.e., of still unknown animal forms about which only testimonial and circumstantial evidence is available, or material evidence considered insufficient by some!' (1988, cited in Coleman and Clark 1999: 76). Using eye-witness and anecdotal testimonials, both historical and contemporary, Forth suggests that there exists on the Indonesian island of Flores an endemic but 'mystery' felid (*ngo ngoe*) which has eluded scientific discovery but which local people recognise as being of a different order to domestic cats (*Felis catus*). Forth's chapter, along with those of several other contributors (Turner; Walsh and Goldman) emphasises the importance of indigenous or 'folk' knowledge when it comes to documenting and analyzing the existence of cryptids on the ground, demonstrating how anthropologists, in collaboration with local people, are well positioned to shed light on cryptids (and indeed other entities such as spirits, gods, ghouls and ghosts) and interpret them in ways which utilize a combination of scientific, historical and local knowledge.

Indeed, a recent cryptozoological example clearly illustrates the importance of scientists working with local people in order to better understand the lives of cryptids in the Anthropocene:

The controversy, in 2015, surrounding the first ever sighting by Western scientists of the 'ghost bird' or moustached kingfisher (*Actenoides bougainvillei excelsus*) by a research team from the American Museum of Natural History was, perhaps, an example of how not to engage in cryptozoological research. The scientist leading the research, Christopher Filardi, director of Pacific Programs at the Museum's Center for Biodiversity and Conservation, described the team's mission on the project blog in the language of cryptozoology, emphasising the enigmatic and ephemeral nature of cryptids: 'some species defy the familiar. There are the poorly known, reclusive animals that even when observed never fully shake the legend and

mystery surrounding them. We search for them in earnest but they are seemingly beyond detection except by proxy and story. They are ghosts, until they reveal themselves in a thrilling moment of clarity and then they are gone again. Maybe for another day, maybe a year, maybe a century (Filardi 2015: n.p.)' (Hurn 2016a:7).

The urgency of finding the kingfisher was palpable in the blog and Filardi likened his team's "discovery" of the bird to "a creature of myth come to life" (Filardi 2015: n.p.). However, contrary to Heuvelmans' emphasis on knowing cryptids in order to protect them, Filardi and his team caught and killed their specimen. The body was deemed necessary for scientific understanding of the species, and to encourage investment in conservation. When called to account by the world's media, Filardi justified his actions on the basis of local knowledge of the bird which suggested that it was, in fact, relatively common, with a population in the region of 4,000 individuals. This indigenous information was allegedly corroborated by his team's survey, although the dead specimen was the only example of a male they saw. This particular cryptid, then, was only "unknown" to Western scientists and not to those with whom the unfortunate "he" co-existed.

In his more recent work, Heuvelmans revised the remit of cryptozoology as follows; while maintaining his original emphasis on cryptids as real flesh and blood animals he argued that:

The essential task of cryptozoology is, first, to establish a physical and behavioural identikit portrait, as precise and detailed as possible, for each apparently unknown animal about which one has significant information and then, if it is truly new, to try and discern its most probable zoological identity. Only then, knowing where, when and how to track it down, can one try with some hope of success to encounter it in nature, *in order to better know it and to protect it* (2013: 10, emphasis added).

Heuvelmans' recognition that cryptids need protecting was also echoed by all of the contributors to the volume, and they highlighted numerous ethical issues. Penny Bernard (2016), for example, made a point of not disclosing the location of her fieldwork, while Tanya King (2016) disguised the habitat of her cryptid, the 'ganka'

sea monster encountered by shark fishing boats, to ensure their continued existence. Consequently, throughout the book there emerged a conflict of interest between engaging with cryptids as ‘real’ and potentially exposing them to greater attention which could be damaging. This was certainly the case for the leopards discussed by Walsh and Goodman (2016). For Schmidt (2016) however, the representation of certain deities in cryptid form has been key to their survival. The liminality of the mermaid has facilitated the appropriation of various incarnations of water goddesses far beyond their origin in African religious traditions, enabling them to survive the journey from Africa to Brazil, North America and Europe.

In her chapter, Mette High (2016) pointed out that while cryptids and nonhuman entities more generally tend to be evaluated from human perspectives, wolves are important entities in their own right. Wolves (and other animals) play significant roles in maintaining ecosystems (e.g. Monbiot 2013) while anthropogenic activities (such as mining in this case) cause significant ecological damage. The big cats encountered by myself and my informants in Wales have also impacted on the local ecosystem in significant ways, and their ability to act as keystone predators has, as I will explain in a moment, been identified as a reason to protect them (Hurn 2009).

So, the relationship between cryptids and conservation in the Anthropocene is complex and at times problematic. While in some instances, for example when the cryptids concerned are thought to be variants of known zoological species, the documentation of their presence is important for mobilizing the support and resources needed to conserve and protect habitats (e.g. Walsh and Goldman 2017). However, the conservation agenda becomes muddled in habitats where tangible, zoologically recognized animals incarnate as ephemeral entities. In such circumstances, the conservation of the cryptid is dependent on the maintenance of local cultural traditions, and the mitigation of conflict which is often rooted in fearful coexistence. For example, in Nagaland, the first official sighting of a Bengal tiger (*Panthera tigris tigris*) in 2015 brought home the difficulties of living in close proximity to even small populations of such enigmatic and powerful keystone predators, when a lone tigress was killed by Naga villagers in Medziphema after she entered the village and attacked livestock and a young man.

The fear of wolf people among Mongolian herders described by High (2017) resonates with the fear of “devil workers” in Taussig’s classic ethnography *The Devil and Commodity Fetishism* (1980). Denouncing individuals who behave uncharitably, or

who pursue selfish agendas as *chono* (“wolf”) in High’s case, (or as having entered into contracts with the devil in Taussig’s case) serves to undermine the threat to traditional values and family units posed by capitalist enterprises and the associated commodity fetishism which can accompany the sudden influx of material wealth. A similar practice occurs in South Africa, as described by Bernard (2017), whereby cryptids (in this case water serpents and mermaids) coerce their victims into making a pact which bestows material wealth and good fortune on individuals but with grave consequences for their kin.

My own cryptozoological encounters were, rather appropriately, unexpected outcomes of extended immersive participant observation in a rural farming community in Wales between the years of 2000 and 2012. In this fieldwork context, local farmers found (and continue to find) themselves in conflict with humans in the form of English immigrants and with nonhumans in various forms, but most specifically foxes in the case of my fieldwork. These unwelcome incomers transgressed social, political and economic boundaries by devaluing local traditions and practices in the case of the humans, and predating on livestock in the case of foxes. These actions prompted some of my informants to engage in anti-English, nationalistic protest (e.g. attending the 2002 “Liberty and Livelihood” march, organised by the pro-hunting NGO The Countryside Alliance in response to the UK Government’s proposal to ban hunting with hounds) and to participate in complex hunting rituals to tackle symbolic and actual acts of predation. While I had entered the field as a vegan with very strong anti-hunting views, formed in part by the seeming emphasis on class and sport in British foxhunting as represented in the media and by other academic commentators (e.g. Marvin 2000), I was surprised to find how closely my human informants’ rationalisations of their activities as self-confessed working class huntsmen (and, to a much lesser extent, women), resonated with the ritual practices of subsistence hunter-gatherers from elsewhere in the ethnographic record. Of particular relevance for the conference and this volume however, was my realisation that for my informants, hunting was not a sport or even an enjoyable activity, but rather an arduous ritual process which enabled them to make amends for what they saw as the inappropriate killing of animals (sheep) in their protective custody and care by an animal who represented their human nemeses (as foxes had been imported in large numbers by aristocratic Anglophillic and Anglophonic gentry estates). Through killing foxes, human hunters in this

context at least, could attempt to propitiate the ovine spirits who might otherwise bring misfortune.

Along with foxes, sightings of non-endemic felids, or Alien Big Cats (ABCs) were commonplace in this area. However, rather than viewing them with disdain and hunting them as one might expect, considerable attempts were made to conceal and protect these enigmatic beings. I suggest that this is because they provided my informants with a powerful metaphor for their own predicaments (see Hurn 2009). They also provided me with an unexpected means of thinking through the complexity of human-animal and human-human relations in the area. Like foxes these ABCs also preyed on symbolically and economically valuable sheep and horses, and yet unlike foxes, my human informants celebrated their existence. It was believed that the cats were former exotic pets who had been released by local people following the 1975 Dangerous Wild Animals Act. This Act required owners of non-native and potentially dangerous wild animal species, including big cats such as leopards, to register their pets and comply with strict and expensive requirements to ensure their safe custody and welfare. Rather than comply with this English legislation, my Welsh informants seemingly preferred to turn their animals loose to fend for themselves. Contemporary sightings were explained in terms of the animals not only surviving but flourishing—indeed, animals released in the mid-1970s would have had to have successfully reproduced for a population to still exist (although another possibility was that animals sighted had been released more recently). Their ability to live as fugitives without capture or formal identification was regarded as an act of subversive anti-English resistance (see Hurn 2009, 2016b).

In addition to researching the local farming community, I have also spent over a decade now conducting fieldwork at a multi-faith ashram in this area of Wales. The Community of the Many Names of God at Skanda Vale is an ostensibly Hindu ashram, which came to international prominence back in 2007 when one of their temple bulls, Shambo, was tested positive for bTB and killed by the Welsh Assembly Government amid a media frenzy and appeals from the wider Hindu community for his life to be spared. For the monks and nuns at Skanda Vale, animals are physical manifestations of certain aspects of the divine, in addition to being mortal individuals on a path towards enlightenment. Their temple elephant Valli for example, is regarded as both a member of the taxonomic species (*Elephas maximus*) and a living incarnation of the theriomorphic god Ganesha. Valli's dual identity, and

indeed the inherent spirituality of the other animals at the ashram, including their herds of cattle and water buffalo, is something I have also written about recently (see Hurn forthcoming, 2016c; Hurn and Badman-King forthcoming). The possibility of nonhuman animals as religious subjects, or spiritual beings is relatively common in other contexts, but in the UK to think of nonhuman animals, and especially animals classified as livestock (e.g. cattle), as anything other than objectified commodities is controversial.

Indeed, a new area of research I have recently started to explore is concerned with groups of animal lovers who hold vigils at abattoirs in numerous developed countries to bear witness to the suffering of the cows, pigs and sheep at the end of their short and impoverished lives. While the ‘Save Movement’ as it is termed is rooted in secular animal rights activism, the language these witnesses use to promote their cause is deeply imbued with religious metaphor. Of particular interest is the fact that these vigils have been labelled a form of extremism, certainly in the UK, with parallels being drawn with religious fundamentalism and even terrorism (e.g. Haque 2018; Newkey-Bowden 2017).

Members of the Save movement argue they are attempting to give voice to a muted and exploited group, and this is a matter close to my heart, and a longstanding aim of the anthropological endeavour: how can we speak for others who, whether because of species, gender, ethnicity, or age, can’t speak for themselves? The need to speak for other animals has become a particularly pressing concern in the Anthropocene, when human actions are having potentially irreversible and devastating impacts on the lives of other animals and the environment. The need to recognise and understand the needs and experiences of other animals is at the heart of two other projects which I am currently pursuing.

Firstly, I am PI on a project entitled ‘Tails from the Streets’ which is concerned with assessing and evaluating the management of street dogs in Romania following the implementation of the 2013 Stray Dogs Euthanasia Act. One aim of this project is to attempt to understand the welfare implications from the dogs’ perspective of different management approaches, which has necessitated a range of different methodologies which are usually not employed by anthropologists including Qualitative Behavioural Assessment (e.g. Walker et al. 2016; Wemelsfelder 2007; Wemelsfelder et al. 2000), as well as attempting to consolidate and develop multi-species ethnography (Kirksey and Helmreich 2010; Hurn 2018).



Another current project on zoo soundscapes entitled ‘Listening to the Zoo’ (led by Tom Rice, with Adam Reed, Alex Badman-King and myself as co-investigators) has prompted me to reflect on the benefits of silence in trans-species communication. In the interviews which we have conducted with zoo staff so far, and in our participant observations of and with zoo visitors, my colleague Tom Rice and I have been repeatedly confronted by the potential for sound, in the form of human spoken language, to confuse and obscure true intersubjective interactions between individual animals, regardless of species. Human visitors to zoos appear to feel compelled to talk at nonhuman residents, and to share between themselves often stereotypically anthropomorphic representations of those nonhuman lives. Comments such as “oh look, he’s tired” in response to what keepers recognise as stress yawns in numerous species, and loud, generic bursts of “oooh, oooh, oooh” in response to any nonhuman primate are common examples. Yet keepers have shared their experiences of learning to communicate with some of their nonhuman charges using their own languages. The gentle coughing of gorillas for example being imitated by human caregivers to provide means of calming reassurance.

Primatologists involved in great ape language projects however, have attempted to teach individuals belonging to several nonhuman primate species to communicate with humans using human language (e.g. Terrace 1987; Segerdahl, Field and Savage-Rumbaugh 2005). Many of these language experiments have met with sustained criticism (e.g. Dupre 2016) and accusations of anthropomorphism and researcher bias at best and cruelty and abuse at worst (see Kulick 2017 for a summary, and Nelson 2017 for discussion of one specific case). However, some have enabled individual nonhuman beings to communicate using human language. In one particular case (Savage Rumbaugh et al. 2007), the human researcher conducted interviews with American Sign Language (ASL) conversant bonobos (*Pan paniscus*) about their experiences of captivity and what could be done to improve their welfare. Here is not the place to assess the merits or flaws of that particular study, but it does represent one of the few instances where nonhuman individuals have been credited as co-authors and been given the opportunity to speak on a subject of such profound personal importance to themselves.

While I was attempting to understand the complexities of trans-species conflict between humans and Chacma baboons (*Papio ursinus*) in urban Cape Town, South Africa (see Hurn 2011, 2015), I was made aware of a local woman, Anna Breytenbach,

who claimed to be able to communicate with baboons and other animals. She had achieved some notoriety after writing about her communication with 55 false killer whales (*Pseudorca crassidens*) who beached on Kommetjie Beach, Cape Town in 2009. She claimed that the whales had been poisoned by pollutants in the ocean and had beached because: “they wanted humans to witness their deaths” (Breytenbach 2013).

On learning more about Anna, watching videos of her communicating online, and reading the responses which her work and the work of other ‘Western’ animal communicators attracted, I was reminded of the way in which my suggestion that the foxhunting I had researched in rural Wales was a form of ritual propitiation for farmers who felt guilt at their role in the production of animals for meat has met with objection from attendees at conferences where I have presented the research over the years. Yet the ritualised hunting practices (or indeed the shamanic or other means of communicating with animal spirits) which occur in places and among communities which have traditionally been the focus of anthropological attention, is widely accepted. So, one of the questions I am keen to explore here and in the future is why there is such a reluctance to recognise these phenomena or grant them any credence in so-called developed contexts?

My feeling is that anthropologists are particularly well placed to explore these occurrences of nonsecular phenomena in unexpected places, but in order to do so, we need to be creative, and more willing than ever to engage in and embrace multi-disciplinary and multi-ontological approaches and perspectives. It would have been easy to dismiss the hunting practices of my farming interlocutors as nothing more than an example of a leisure activity enacted by individuals who were habituated to nonhuman death. Certainly, when I embarked on the research, I regarded hunting, as with any other blood sport, with disdain. Yet through sustained, immersive participant observation, and the need for constant reflexivity to challenge my preconceived attitudes towards the activity, and my status as animal advocate and proto-activist, I was surprised to find something unexpected below the surface – something which seemed at odds with the increasingly industrialized approach to animal agriculture and the inherently secular activity of commercial livestock production.

The complex ways in which information can be disseminated between members of different species is a burgeoning area of interest in both the social and biological sciences (Hurn 2012). While anthropologists have long prioritised spoken,

grammatical language, there are countless other ways of sharing meaning which exist and flourish beyond what are, in reality, our rather limited perceptual abilities (e.g. Bradshaw 2010). Indeed, as scientific knowledge and understanding of the communicative repertoires and sensory capabilities of other animals deepens (e.g. Ristau and Marler 2014), and as humans grapple with the reality of living in the Anthropocene, a time of unprecedented human impact on the environment, the potential for considering alternative forms of communication, and ‘listening’ to the ‘voices’ of members of other species becomes particularly prescient (Bradshaw 2010; Bird Rose 2011; van Dooren 2014). However, just how best to ‘listen’ to these voices remains something of a challenge for academics concerned with exploring trans-species entanglements (e.g. Birke and Hockenhull 2012; Hodgetts and Lorimer 2014). One controversial possibility, which has received very little academic attention to date, is psychic communication (Barrett [2011; 2013a and b] is a notable exception).

While psychic communication tends to be viewed with scepticism, even disdain by “Western science”, and while “Western science” is still driven by a desire for objectivity and a persistent fear of anthropomorphism, non-verbal communication between humans and other-than-human beings through a range of unscientific methodologies including dreams, visions, trance, hallucinations or even just close inter-subjective encounters is a taken for granted fact for many of the peoples who have traditionally been the focus of anthropological enquiry (e.g. Bernard and Kumalo 2004; Fausto 1999; Kohn 2013; de Castro 1998; Straight 2009; Willerslev 2007). Indeed, not only are humans regularly engaged in conversations with other living beings and spiritual entities, but these nonhumans are regularly consulted to advise on matters of human conduct and environmental concern. In many contemporary contexts, particularly in relation to issues pertaining to environmental crisis and wildlife management, the traditional knowledge of indigenous peoples, and their spiritual connections with other animate beings, is being utilised to good effect (e.g. Barrett 2012; Barrett and Wuetherick 2012; Bernard 2003; Nadasdy 2004, 2005), while for others, especially in “developed” contexts, animal spirits are contacted through spiritual consultations and memorialised in various ways as acts of reverence or in a bid to propitiate potentially vengeful hauntings which can have wider destructive impacts (e.g. Ambrose 2010).

Anthropologists have been reasonably open to accepting the world-views of traditionally shamanic, animistic or “perspectivist” cultures (although the lumping

together of these practices needs to be problematized [see Harvey 2010] it falls beyond the scope of the current paper to do so), particularly when they have experienced acts of spirit mediumship or spirit possession themselves (Bernard 2016; Hunter 2011; Stoller and Olkes 2013). Anthropologists have also considered the prevalence of comparable beliefs and practices outside of contexts where these are traditionally held and practiced (Hunter and Luke 2014). However, as I have argued elsewhere (Hurn 2010, 2012) anthropology is inherently anthropocentric and as a result attention has focused on human voices (e.g. Hunter and Luke 2014). Unsurprisingly therefore, no sustained attention has yet been paid to individuals who claim to be “animal communicators”, while their ‘connection’ to the nonhuman world, and the interface between trans-species psychic communication and mainstream (in particular veterinary) science has not been systematically explored. In a manner reminiscent of indigenous shamans, mediums and witchdoctors, contemporary animal communicators promote their ability to converse with animals, both living and dead, and relay the content of their conversations, along with supplementary counsel and guidance (including medical diagnoses and treatment), to those animals’ human guardians (e.g. Kinkade 2005). Animal communicators are called on to assist in a wide range of situations. These include locating lost companions or resolving behavioural issues through to contacting the spirits of deceased animals. While most of their clients are the guardians of companion animals, the services of animal communicators are also increasingly being sought by “scientific professionals” including practicing veterinary surgeons. Indeed, many animal communicators claim to assist with the diagnosis and management of problem patients whose conditions were previously eluding conventional veterinary diagnostic techniques or failing to respond to allopathic treatments (Weaver, pers. comm.). Animal communicators are also being enlisted to help resolve issues of human-wildlife conflict, as well as acting as spokespersons for animals who suffer at human hands (e.g. Breytenbach 2013).

Biologist Rupert Sheldrake is one of the few scientists to have taken the possibility of trans-species psychic communication seriously and he conducted a series of experiments to explore the extra-sensory abilities of nonhuman animals, with some notable but under-reported results (Sheldrake 1994, 1999, 2011; Sheldrake and Smart 2000; Sheldrake and Morgana 2003). Sheldrake’s (2003) telepathic conception of the ‘extended mind’ is controversial in mainstream scientific

communities, including psychology, theology and philosophy of mind (e.g. Sheldrake and Freeman 2005; Wiseman et al. 1998). However, his work has been taken more seriously by scholars in the field of animal behaviour and cognitive ethology (Burton 1973) and anthropologists working on sensory perception (Howes 2009; Hurn 2016). In animal behaviour, knowledge of the extra-sensory abilities of some animal species makes the possibilities of psychic communication less controversial (Hughes 2001), although, as research on the abilities of some dogs to detect cancer or other life-threatening conditions in their human guardians has demonstrated, there are sometimes “rational” explanations for seemingly paranormal behaviours. In the case of the dogs trained by UK charity Medical Detection Dogs, the power of canine microsmatic ability is such that they can smell slight changes in body odour which signify disease (see Eason 2017; Willis et al. 2011). The apparent psychic abilities of some dogs to predict when their owners would return home (e.g. Sheldrake 2011; Sheldrake and Smart 2000) has been widely dismissed (e.g. Wiseman and Smith 1996; Wiseman, Smith and Milton 1998) on grounds such as poor experimental design, dogs picking up on sensory cues from humans, and human error (selectively or misremembering when and how frequently the dog signalled the return of their owner, and incorrect interpretation of animal behaviour).

To draw the paper to a close, I wanted to share an example of possible trans-species psychic communication from the UK. Welsh farmers might not, on the surface, appear the most likely candidates for employing the services of animal communicators. However, I was surprised to discover that six of my human interlocutors had turned to unconventional means to treat horses or companion dogs, and I was fortunate enough to observe seven different consultations during fieldwork in rural Wales. One informant, “Vivienne”, the daughter of a hill sheep farmer and herself a well-established and successful horse breeder and former poultry farmer, routinely consulted an animal communicator when her horses were ill, and even during emergencies while she was waiting for the vet to arrive! The communicator in question would communicate psychically with the horse. I was surprised that this communication could occur even if the animal was in a different room or a different part of the property. Indeed, during one consultation I observed, the canine patient got up and walked out of the kitchen where the consultation was taking place mid-way through proceedings, and in others, the communicator was not

physically present, but rather meditated on a photograph of the animal which her human client had emailed to her. In another case, a farming informant had sent a lock of horse hair from the patient to the communicator as a means of establishing connection with the animal. Regardless of method, once the connection had been established, the communicator would feel the patient's experiences, or the patient would present information, sometimes in spoken English, other times through the use of images or sensations. She would then relay information not only about the patient's condition, or past experiences which were impacting on their current wellbeing, but also what the patient thought might help. It was Vivienne's first experience of calling on the services of an animal communicator which set the precedent for her future practice. She had purchased a horse, "Flame", from Spain (as did a surprising number of my informants, who saw phenotypic and behavioural similarities between the Spanish breeds and the native Welsh cobs), and in a short space of time he had become "cold backed" (uncomfortable about having his back touched, and resistant to a saddle or rider). Vivienne had gone to great expense with vets, an equine dentist, bespoke saddler and a chiropractor who had all drawn blanks, so contacted an animal communicator, "Nanette", out of desperation. Through Nanette, Flame was able to explain that he was experiencing pain when passing urine and this was also causing him pain in his back (kidneys are close to surface, just behind saddle area). He informed his owner, via the intermediary of the communicator, that "sour apples" would help him, and as he imparted this information, Nanette's senses were flooded with the smell and taste of cider vinegar, a well-known traditional remedy for urinary tract infections. A urine test was subsequently carried out and showed very high levels of protein. The vet prescribed antibiotics as she was sceptical that cider vinegar alone would have an impact, but Vivienne opted instead to trust in Flame's zoopharmacognostic ability, and Nanette's translation, and began adding raw cider vinegar to his feeds and not the antibiotics. Within a week he was back to normal.

Anthropologists are regularly confronted by the fact that while 'Western science' only acknowledges five senses, many other human cultures and individuals around the world recognise additional senses which connect us to, and allow us to communicate with and understand, the world around us (e.g. Howes 2009). Exploring alternative possibilities such as trans-species psychic communication presents the potential for nonhuman voices to be heard in ways which might unsettle

the dominant discourses and exploitative practices which characterise the Anthropocene.



## REFERENCES

- Ambrose, B. 2010. "Vengeful Spirits or Loving Spiritual Companions?. Changing notions of animal spirits in contemporary Japan." *Asian Ethnology*, 69: pp. 35-67.
- Barrett, M.J. 2012. "Decentering Norms: Teaching Multiple Ways of Knowing in Environmental Decision-making." *Collected Essays on Learning and Teaching*, 5: pp. 103-108.
- . 2013a. "A Hybrid Space: Epistemological Diversity in Socio-ecological Problem-solving." *Policy Sciences*, 46(2): pp. 179-197.
- . 2013b. Researching through Porosity: An Animist Research Methodology. G. Harvey, ed. *The Handbook of Contemporary Animism*. Durham: Acumen Publishing, 20(1): pp. 56-69.
- . 2011. "Doing Animist Research in Academia: A Methodological Framework." *Canadian Journal of Environmental Education* 16: pp. 123-141.
- Barrett, M.J. & Wuetherick, B. 2012. "Intuition and Animism as Bridging Concepts to Indigenous Knowledges in Environmental Decision-making." *Transformative Dialogues: Teaching and Learning Journal* 6(1): pp. 1-17
- Bernard, P. 2003. "Ecological Implications of Water Spirit Beliefs in Southern Africa: The Need to Protect Knowledge, Nature and Resource Rights." USDA Forest Service Proc. RMS, 27: pp. 148-153.
- . 2016. Suspending Disbelief and Experiencing the Extraordinary. In Hurn, S., ed. *Anthropology and Cryptozoology: Exploring Encounters with Mysterious Creatures*. London: Routledge: pp. 139 - 156.
- Bernard, P, and Kumalo, S. 2004. Community-based natural resource management, traditional governance and spiritual ecology in southern Africa: The case of chiefs, diviners and spirit mediums. In C. Fabricius and E. Koch with H. Magome and S. Turner, eds. *Rights Resources and Rural Development: Community Based Natural Resources Management in Southern Africa*. London: Earthscan: pp. 115-126.
- Bird Rose, D. 2011. *Wild Dog Dreaming: Love and Extinction*. Charlottesville: University of Virginia Press.
- Birke, L., & Hockenhull, J., Eds. 2012. *Crossing Boundaries: Investigating Human-Animal Relationships* (Vol. 14). Leiden: Brill.
- Bradshaw, G. A. 2010. "You See Me, but Do you Hear Me? The Science and Sensibility of Trans-species Dialogue." *Feminism & Psychology* 20(3): pp. 407-419.
- Breytenbach, A. 2013. "What Whales Want." *Animal Spirit*. <https://www.animalspirit.org/content/what-whales-want> [last accessed 23rd August 2018]

- Burton, M. 1973. *The Sixth Sense of Animals*. New York: Taplinger Publishing Co., Inc.
- Coleman, L. and Clark, J. 1999. *Cryptozoology A to Z. The Encyclopedia of Loch Monsters, Sasquatch, Chupacabras, and Other Authentic Mysteries of Nature*. New York: Simon and Schuster.
- Dupre, J., 2016. Conversations with Apes: Reflections on the Scientific Study of Language. In *Investigating Psychology*. London: Routledge: pp. 109-130
- Eason, F., 2017. "Doing Diabetes (Type 1): Symbiotic Ethics and Practices of Care Embodied in Human-Canine Collaborations and Olfactory Sensitivity." Unpublished PhD thesis. Exeter: University of Exeter.
- Fausto, C. 1999. "Of Enemies and Pets: Warfare and Shamanism in Amazonia." *American ethnologist* 26(4): pp. 933-956.
- Filardi, C. 2015. "Field Journal: Finding Ghosts." *American Museum of Natural History*. <https://www.amnh.org/explore/news-blogs/from-the-field-posts/field-journal-finding-ghosts> [last accessed 4<sup>th</sup> october 2018]
- Forth, G. 2016. 2 Cryptids, Classification and Categories of Cats. In *Anthropology and Cryptozoology: Exploring Encounters with Mysterious Creatures*. Hurn, S. ed. London: Routledge: pp. 32 – 53.
- Goldman, H.V. and Walsh, M.T. 2016. Cryptids and credulity: The Zanzibar Leopard and Other Imaginary Beings. In *Anthropology and Cryptozoology: Exploring Encounters with Mysterious Creatures*. Hurn, S. ed. London: Routledge: pp. 70-106
- Haque, A. 2018. "Vegans Call Me Murderer and Rapist" *BBC News*. <https://www.bbc.co.uk/news/uk-42833132> [last accessed 13th August 2018]
- Howes, D. ed. 2009. *The Sixth Sense Reader*. Oxford: Berg.
- Haraway, D. 2015. "Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making Kin." *Environmental humanities* 6(1): pp. 159-165.
- . 2016. *Staying with the Trouble: Making Kin in the Chthulucene*. Durham: Duke University Press.
- Harvey, G. 2010. Animism rather than Shamanism: New Approaches to what Shamans Do (for Other Animists). In *Spirit Possession and Trance : New Interdisciplinary Perspectives*. Schmidt, Bettina and Huskinson, Lucy eds. Continuum Advances in Religious Studies (7). London: Continuum: pp. 14-34
- Heneise, M. 2016. By dreaming I'll go to the tiger-world': the Naga tiger-man and the modern assemblage of a myth. In *Anthropology and Cryptozoology: Exploring Encounters with Mysterious Creatures*. Hurn, S., ed. London: Routledge. pp. 91 – 106.
- Heuvelmans, B. 1988. "The Sources and Method of Cryptozoological Research." *Cryptozoology* 7: pp. 1-21.

- . 2013. *Natural History of Hidden Animals*. London: Routledge
- High, M.M., 2016. Human Predation and Animal Sociality: The Transformational Agency of 'Wolf People' in Mongolia. In *Anthropology and Cryptozoology: Exploring Encounters with Mysterious Creatures*. Hurn, S. ed. London: Routledge: pp. 123-135.
- Hodgetts, T., & Lorimer, J. (2014). "Methodologies for Animals' Geographies: Cultures, Communication and Genomics." *Cultural Geographies* 22 (2): pp. 285-295
- Hughes, H. C. 2001. *Sensory Exotica: A World beyond Human Experience*. Cambridge, MA: The MIT Press.
- Hunter, J. 2011. "Talking with the Spirits: Anthropology and Interpreting Spirit Communications." *Journal of the Society for Psychical Research*, 75 (904): pp. 129-142
- Hunter, J., & Luke, D. 2014. *Talking with the Spirits: Ethnographies from Between the Worlds*. Brisbane: The Daily Grail publishing.
- Hurn, S, ed. 2016a. *Anthropology and Cryptozoology: Exploring Encounters with Mysterious Creatures*. London: Routledge.
- Hurn, S. (forthcoming). "Exposing the Harm in Euthanasia: Ahimsa and an Alternative View on Animal Welfare as Expressed in the Beliefs and Practices of the Skanda Vale Ashram, West Wales." In *Handbook of Religion and Animal Ethics*. Linzey, A. and Linzey, C. eds. London: Routledge.
- . 2009. "Here be Dragons? No, Big Cats! Predator Symbolism in Rural West Wales." *Anthropology Today* 25 (1): pp. 6 – 11.
- . 2011. "Like Herding Cats! Managing Conflict over Wildlife Heritage on South Africa's Cape Peninsula." *Journal of Ecological and Environmental Anthropology* 6 (1): pp. 39 – 53.
- . 2012. *Humans and Other Animals: Human-Animal Interactions in Cross-Cultural Perspective*. London: Pluto Press.
- . 2015. Baboon Cosmopolitanism: More-Than-Human Moralities in a Multispecies Community. In *Cosmopolitan Animals*. Nagai, K., Jones, K., Landry, D., Mattfeld, M., Rooney, C., & Sleigh, C. Eds. Basingstoke: Palgrave Macmillan.
- . 2016b. Land of Beasts and Dragons: Modern Myth-making in Rural Wales. In *Anthropology and Cryptozoology: Exploring Encounters with Mysterious Creatures*. Hurn, S. Ed. London: Routledge.
- . 2016c. "Animals as Producers, Consumers and Consumed: The Complexities of Trans-species Sustenance in a Multi-faith Community." *Ethnos: Journal of Anthropology* 82 (2): pp. 213-231. DOI 10.1080/00141844.2015.1107611
- . 2018. Encounters With Dogs as an Exercise in Analyzing Multi-Species Ethnography. In *Sage Research Methods*. Lewis, J. Ed. London: Sage. DOI 10.4135/9781526440921.

- Hurn, S. and Badman-King, A. (forthcoming – under review). “Care as an Alternative to Euthanasia? Reconceptualising Veterinary Palliative and End of Life Care” *Medical Anthropology Quarterly* [Special issue edited by Brown, H. and Nading, A.]
- Jhala, Y. V., Qureshi, Q. and Gopal, R. eds. 2015. “The Status of Tigers in India 2014.” National Tiger Conservation Authority, New Delhi and The Wildlife Institute of India, Dehradun. 18 March 2016. (Accessed from [http://projecttiger.nic.in/WriteReadData/LetestNews/Document/Tiger%20Status%20booklet\\_XPS170115212.pdf](http://projecttiger.nic.in/WriteReadData/LetestNews/Document/Tiger%20Status%20booklet_XPS170115212.pdf)).
- King, T.J. 2016. Ganka: Trickster or Endangered Species?: An Anthropologist’s Role in Preventing the Extinction of the New Jersey Sea Monster. In *Anthropology and Cryptozoology: Exploring Encounters with Mysterious Creatures*. Hurn, S. ed. London: Routledge: pp.159-171.
- Kohn, E. 2013. *How Forests Think: Toward an Anthropology Beyond the Human*. Berkeley: University of California Press.
- Kulick, D. 2017. “Human–Animal Communication.” *Annual Review of Anthropology* 46: pp. 357-378.
- Marvin, G., 2000. “Natural Instincts and Cultural Passions: Transformations and Performances in Foxhunting.” *Performance Research* 5(2): pp. 108-115.
- Nelson, I.L., 2017. “Interspecies Care and Aging in a Gorilla 2.0 world.” *Geoforum* 79: pp. 144-152.
- Merz, S. 2016. Enigmatic Bush Dwarfs of West Africa: The Case of the Siyawesi of Northwestern Benin. In *Anthropology and Cryptozoology: Exploring Encounters with Mysterious Creatures*. Hurn, S. ed. London: Routledge: pp. 136-154.
- Monbiot, G. 2013. *Feral: Searching for Enchantment on the Frontiers of Rewilding*. London: Penguin.
- Nadasdy, P. 2004. *Hunters and Bureaucrats: Power, Knowledge, and Aboriginal-State Relations in the Southwest Yukon*. Vancouver: University of British Columbia Press.
- . 2005. “Transcending the Debate over the Ecologically Noble Indian: Indigenous Peoples and Environmentalism.” *Ethnohistory* 52(2): pp. 291-331.
- Newkey-Burden, C. 2017. “Our Counter-terrorism Experts Shouldn’t be Wasting Their Time on the ‘Save’ Animal Welfare Protest Movement” *Independent*. <https://www.independent.co.uk/voices/save-veganism-abattoirs-animal-cruelty-terrorism-vigils-animal-welfare-a7579251.html> [last accessed 13th August 2018]
- Ristau, C. A., & Marler, P. Eds. 2014. *Cognitive Ethology: Essays in Honor of Donald R. Griffin*. New York: Psychology Press.

- Schmidt, B.E., 2016. Mermaids in Brazil. The (ongoing) Creolisation of the Water Goddesses Oxum and Iemanjá. In *Anthropology and Cryptozoology: Exploring Encounters with Mysterious Creatures*. Hurn, S. ed. London: Routledge. pp. 157 - 170.
- Segerdahl, P., Fields, W. and Savage-Rumbaugh, S. 2005. *Kanzi's Primal Language: The Cultural Initiation of Primates into Language*. Basingstoke: Palgrave MacMillan.
- Sheldrake, R. 1999a. "Commentary on a paper by Wiseman, Smith and Milton on the psychic pet phenomenon." *JSPR* 63 (857): pp. 306-311.
- . 1999b. *Dogs That Know When Their Owners Are Coming Home and Other Unexplained Powers of Animals*. Hutchinson: London.
- . 2003. *The Sense of Being Stared At and Other Aspects of the Extended Mind*. New York: Crown Publishers.
- . 2011. *Dogs that Know When their Owners are Coming Home and Other Unexplained Powers of Animals*. New York: Broadway Books.
- Sheldrake, R. & Freeman, A. eds. 2005. "Sheldrake and his Critics: A Sense of Being Glared at." *Journal of Consciousness Studies* [special edition] 12 (6).
- Sheldrake, R., & Morgana, A. 2003. "Testing a Language-using Parrot for Telepathy." *Journal of Scientific Exploration* 17(4): pp. 601-616.
- Sheldrake, R., & Smart, P. 2000. "Testing a Return-anticipating Dog, Kane." *Anthrozoos: A Multidisciplinary Journal of The Interactions of People & Animals* 13(4): pp. 203-212.
- Stoller, P., & Olkes, C. 2013. *In Sorcery's Shadow: A Memoir of Apprenticeship Among the Songhay of Niger*. Chicago: University of Chicago Press.
- Straight, B. 2009. Sensing Divinity, Death, and Resurrection. Theorizing Experience through Miracles. In *The Sixth Sense Reader*. Howes, D. ed. Oxford: Berg.
- Taussig, Michael. 1980. *The Devil and Commodity Fetishism in South America*. Chapel Hill: University of North Carolina Press.
- Terrace, H.S., 1987. *Nim: A Chimpanzee Who Learned Sign Language*. New York: Columbia University Press.
- Turner, S.S. 2016. The Place of Cryptids in Taxonomic Debates. In *Anthropology and Cryptozoology: Exploring Encounters with Mysterious Creatures*. Hurn, S. ed. London: Routledge: pp. 28-47.
- Van Dooren, T. 2014. *Flight Ways: Life and Loss at the Edge of Extinction*. New York: Columbia University Press.
- Viveiros de Castro, E. 1998. "Cosmological Deixis and Amerindian Perspectivism." *Journal of the Royal Anthropological Institute* 4 (3): pp. 469-488.

- Walker, J.K., Dale, A.R., D'Eath, R.B. and Wemelsfelder, F. 2016. "Qualitative Behaviour Assessment of Dogs in the Shelter and Home Environment and Relationship with Quantitative Behaviour Assessment and Physiological Responses." *Applied Animal Behaviour Science* 184: pp. 97-108.
- Wemelsfelder, F. 2007. How animals communicate quality of life: the qualitative assessment of behaviour. *Animal Welfare* 16(2): pp.25-31.
- Wemelsfelder, F., Hunter, E.A., Mendl, M.T. and Lawrence, A.B., 2000. "The spontaneous qualitative assessment of behavioural expressions in pigs: first explorations of a novel methodology for integrative animal welfare measurement." *Applied Animal Behaviour Science* 67 (3): pp. 193-215.
- Willerslev, R. 2007. *Soul hunters: hunting, animism, and personhood among the Siberian Yukaghirs*. Berkeley: University of California Press.
- Willis, C.M., Britton, L.E., Harris, R., Wallace, J. and Guest, C.M., 2011. "Volatile organic compounds as biomarkers of bladder cancer: Sensitivity and specificity using trained sniffer dogs." *Cancer Biomarkers* 8(3): pp. 145-153.
- Wiseman, R. & Smith, M.D. 1996. "Can pets detect when their owners are returning home? An experimental test of the 'psychic' pet phenomenon." Proceedings of the 39th Parapsychological Association, Convention, USA: pp. 35-44.
- Wiseman, R., Smith, M. and Milton, J. 1998. "Can animals detect when their owners are returning home? An experimental test of the 'psychic' pet 'phenomenon.'" *British Journal of Psychology* 89(3): pp. 453-462.



PIERRE DU PLESSIS

TINGLING ARMPITS AND THE MAN WHO HUGS LIONS:

Dangerous Ghosts of Sameness and Different Differences

The secularization of knowledge production that arose out of the Enlightenment is largely defined by the way it cemented a sharp epistemological divide between science and religion, and thereby knowledge and belief. This dichotomy has been as central problem for anthropologists, and much of my own work in the Kalahari Desert that has focused on tracking animals and landscapes as modes of knowing rests on the backs of works that have challenged the assumptions inherent in the divide. This has brought my attention to practices through which the materialities of landscapes and their inhabitants—human and nonhuman—are engaged with and related to. However, prompted but the challenge that much multispecies research associated with Anthropocene has left little room for the nonsecular, whether ghosts, spirits, ancestors, or simply other modes of knowing, the problem of a knowledge-belief dualism rears its head once again. In this paper, I describe this problem through the question of what counts as the evidentiary in wildlife monitoring tracking surveys with a focus on modes of knowing nonhumans that exceed wildlife biologists' framework of the evidentiary in the capture of data in survey counts.

In this paper, I look for what Helen Verran calls the “generative possibilities of going on together doing difference” before coming to concepts (Verran 2013: 146). I hope to find generative spaces of mutual encounter not only when different conceptual apparatuses might be at play, but also when their realities that mundanely hang together, rub against each other. I do this by telling two stories about people and lions in the Kalahari Desert in Botswana, and my own moments of epistemic disconcertment, again thinking with Verran, to explore moments of discomfort.

PEOPLE AND LIONS IN THE KALAHARI

People and lions in the Kalahari Desert in Botswana have complicated relationships and histories of interaction together. Many San, or Bushmen, have a different kind of relationship with lions than they do with other animals. While animals and



people are certainly different for my interlocutors, they have described a simultaneous recognition of a kind of sameness with nonhumans that resonates into the present from a past primordial time when people and animals were not distinct from each other, much as been described by Mathias Guenther in his studies of Bushmen religions (Guenther 1999). Lions, however, unlike animals that are hunted, are viewed with respect for their skill as hunters, or rather, lions and hunters have been said to have a mutual respect for each other because of their shared practices and histories of hunting the same sorts of prey, using the same watering holes, and moving about the landscapes together as hunters, albeit differently (Guenther 1999:71). Lions, however, have also been viewed with a fair bit of hatred as dangerous creatures, particularly when they kill people.

Lions are other things, too, for different people. For cattle herders they can be pests that threaten their herds, where social and material capital are stored through cattle kin relations. To cattle ranchers, lions are sometimes viewed as thieves that steal their cattle commodities. Today, in a property bound state, these crimes by lions are punishable by death, sometimes even occurring pre-emptively, when lions dare to trespass. But wealthy cattle ranchers have also realized they can profit from Big Game hunters from overseas hunting these lions on their farms, the trade-off for loss of cattle was worth it as lions were transformed into another kind of commodity sold for sport. With hunting now banned in Botswana, however, this trade-off is no longer an option for cattle owners, and some say that more lions are killed now by farmers as a result. These things have also significantly transformed many San people's experiential relationships with lions. Yet, multiple past histories still resonate into their present experiential relations with lions. All this is to say that lions are different to people in the Kalahari but they are different in different ways. There are different differences. This paper explores some ways in which the relationships between lions and humans, and their mutual recognition of each other, are complicated when these different histories and different differences get tangled up.

## TRACKING SURVEYS

I participated in several tracking surveys in the Kalahari Desert in 2009 and 2010. During this time, I moved around a wildlife corridor with 15 trackers from settlements between two wildlife parks. This was part of a conservation project that aimed to formally establish the corridor as a protected area linking the two parks,

which is one of the longest remaining wildlife dispersal areas in Southern Africa. This corridor is under threat of being cut off by the proliferation of cattle posts and farms, growing settlements, fences and roads.

The surveys I participated in employed trackers, primarily San, to count and record the distribution of animal tracks. In order to collect reliable scientific data, all trackers involved in the project were assessed on the level of their tracking skill. Through this formal assessment, the scientists could claim the validity of their data through a standards-based protocol. Trackers walked along transects entering the number of tracks of different species into their handheld GPS devices. Tracks, and the associated animals, were not followed but encountered along linear transects and counted, transforming them into data sets through their direct observation, not of animals necessarily, but of their tracks and traces. Compared to other survey methods for monitoring and estimating wildlife populations like aerial surveys that miss so much, some environmental scientists have been arguing that tracking surveys provide richer and more diverse data set because of their capacity to “Detect the Unseen.”

I want to point to one example of a kind of tracking or recognition of the presence of an animal that escapes this rationalized scientific method for monitoring the presence of wildlife, or another way in which trackers I have worked with detect the unseen through their embodied sensorium. In other words, I want to point to a way of “detecting the unseen” that is deemed uncountable by scientists in the knowledge enclosures that transects produce, but is very real for my interlocutors.

#### STORY 1: TINGLING ARMPITS

After a long day of driving off-road through the bush with three trackers our 4x4 began to overheat. It was the winter dry season and the tall dry grass clogged the radiator. As a result, we could only drive for a few minutes before the engine overheated, at which point we stopped the vehicle to let it cool down before carrying on. By the time night fell and the cold winter air arrived we were still far from camp. We rolled to a stop on the edge of a salt pan, a kind of dry, fossilized, lake bed.

As I tended to the vehicle, urging the engine to cool down, the three trackers built a small fire in the pan to keep warm. After a few minutes, all three trackers suddenly jumped up and climbed into the vehicle, insisting that we leave immediately. !Nate, one of the trackers, yelled to me “A lion is here, we must go! Come inside the car.”

Startled, I jumped into the car too. The engine was still hot and fearing that radiator would crack, I was reluctant to go.

“Where is the Lion?” I asked.

“Our bodies are telling us that a lion is near, go go go!”

“What?” I replied.

!Nate, grew frustrated and shouted, “It is here. We must go now!”

A bit shaken up, I drove away. A short while later !Nate and the two other trackers explained that the muscles around their armpits started tingling and sweating. This feeling is a telltale sign that a lion, and thus danger, is approaching. Neither !Nate nor the other two trackers said they saw, heard, or smelled the lion approaching when I asked. But they all said they felt it in their bodies. This happened several more times in the months that followed and then again a few years later during my dissertation research with these trackers. I never felt the tingling sensation (or so I thought until writing this paper, I think) but I knew to react when my interlocutors felt this sign of lions, even though we never stuck around to see if lions were there. It was too dangerous to do so.

I considered testing tingling armpits as a way of noticing the presence of lions, but my tracking interlocutors were never willing participants. I wanted to find proof. Similarly, the most common response to my telling of these stories is: So, were the lions really there? As you might expect, the environmental scientists I have worked with do not consider this embodied sensing of lions to be valid data, though several researchers have told me that they too take these warnings from trackers very seriously. What is it about the material trace of a lion in the form of a track in the sand that is countable as objective data signifying the presence of lions, while the embodied traces of the lion in the form of tingling armpits is not? What counts as the evidentiary? What counts as countable? Why are the tracks evidence while the tingles merely specters?

This tingling escapes the sensorium of my own epistemic tendencies. In my own thinking about the tingling armpits I have tended towards interpreting this as my informants embodied sensing of fine subtle queues in the environment to which I was not attuned. A shift in the wind, a subtle almost imperceptible sound, a slight peripheral movement. I rationalized, speculated about some kind of material truth. But my interlocutors refused my assessment. They could see the lion in their bodies.

It was not until I began hearing stories from my interlocutors about human-animal relations and the ambiguity of difference between species that I came to see this in a somewhat different light. This relational sensorium extended beyond any direct encounter, or the relational practice of tracking. It involved histories and present relations together that co-mingle with a primordial time when humans and animals were not all that different from each other.

For my tracking interlocutors, the relationship between a hunter and an animal is one of simultaneous object otherness and significant otherness. They are potentially radically different and somewhat same at the same time. As !Nate told me “My people and the animals know each other because my god put us here at the same time. We are the same, but we are also not the same.”

The tingling armpits is a way of recognizing the presence of lions in their bodies, in part, because their past sameness allows for a particular kind of attunement. Here, the resonances of the ghosts’ sameness make lions particularly relatable and dangerous. But again, there are two dimensions to this sameness. When people and animals were non-distinct, a relation that now reverberates into the present, and another that emerges from shared histories and shared practices of hunting, as respected and feared rival hunters.

But with hunting banned, the trackers are now counters. Counting is one of their primary relationships with lions now, at least for my primary interlocutors. And though their counting doesn’t allow for the embodied evidence about lion presence, their shared histories as hunters, the relation of significant otherness between animals and people are not simply erased. They still feel lions in their bodies. But, the differences are now different, with the ghosts of sameness still reverberating in the present.

## RECONFIGURATIONS OF RELATIONS IN THE LANDSCAPE AND BETWEEN SPECIES

As I mentioned earlier, one of the reasons for conducting wildlife tracking surveys is to assess the number and frequency of different species trafficking through a corridor that is closing because of encroachment, largely due to the proliferation of cattle ranches and cattle posts. As Julie Livingston (2016) has suggested, the explosion of the cattle population in Botswana can be seen, at least in part, to be the result of a transformation of the interspecific relationship between humans and cattle from one

of cultural kinship and significant otherness amongst Batswana (the majority ethnicity in Botswana), to abstracted commodity form to be disassembled and shipped off to Europe. As the second largest industry in Botswana's economy, the explosion of cattle into commodity form has led to the commons being increasingly privatized to support ranching. With the expansion of cattle ranches has come an increase in fencing, both to cordon off and demarcate private property, and as a result of European imposed hygienic standards that stipulated the imposition of veterinary fences to separate wildlife from export quality beef. Both kinds of fences, veterinary fences that cement wild domestic animal differentiation under very general categories, and ranch fences that impose boundaries of private property enclosure, are considered two primary causes of encroachment and closure of this wildlife migratory corridor. And, this has changed human relationships to lions too in other ways. It is with regard to cattle and other livestock, that we now have the most common cases of what is framed as "human wildlife conflict". Which leads me to my next story.

## STORY 2: THE MAN WHO HUGS LIONS

Several years ago, Dan, a German man in his mid 20's set up a camp within a game farm in the Kalahari. The game farm belongs to an Afrikaans cattle farmer who owns several other large cattle ranches. Cattle on such ranches are frequently preyed upon by wildlife and farmers often respond by killing "problem animals." The ranch owner used to do this himself but changed his practices not so long ago. Instead of simply hunting "problem animals" he started capturing them and moving them to one of his ranches where he built enclosures for them to live. These kinds of operations arose suspicion from the conservation community as they suspected animals were being captured for live animal trade at best, or canned hunting at worst. This particular ranch owner was accused of this. His captured wildlife were reproducing and soon he had more than he could maintain on his farm, and to mitigate the accusations he hoped to eventually relocated the predators away from his farms, or if they ended up remaining in the enclosures, inserting contraceptives to prevent captive births.

Dan set up an educational camp on the owner's farm in which paying "volunteers" could help with feeding the animals, cleaning the enclosures, while learning about Kalahari ecologies, and addressing concerns about animal welfare

and relocating animals when possible. In the early stages of setting up his operation, the owner of the farm approached Dan and asked him to save a lion cub. One of the captured lionesses had given birth to a litter of cubs but the males sharing the enclosure were killing all of the cubs. The owner, who also has a luxury tourist lodge on the farm, reported that guests were complaining, worried about the fate of the last remaining cub, and asked Dan to remove it from the enclosure. Dan, as he tells it, rather reluctantly removed the cub and raised it by hand. The cub, he named Siri, now lives in its own enclosure where no one other than Dan interacts with her. As she grew older Dan started going on walks with her and eventually even began hunting with her. In the process they developed an intimately kin-like relationship, though a byproduct or an excess of enclosure, capital, and forced domestication.

While Dan is very strict about who can interact with Siri, he often lets volunteers watch him and Siri play together from outside the fenced enclosure. When he enters she runs towards him, jumps on him, giving him a giant hug. Now that she is a full-grown lioness the hugs bring Dan toppling to the ground where the two roll around cuddling each other. Recordings of this greeting between friends has become a YouTube sensation with millions of views.

Dan invited me and the trackers I work with visit his camp and allowed us to join a group of volunteers to see the spectacle. A group of nine people, including four trackers and myself, lined up along the fence as Dan and his assistant prepared for him to enter the enclosure. Dan asked us to remain silent and not make too many sudden movements while we watched. Dan's assistant threw a part of a wildebeest leg over the three-meter-tall fence, and Dan then quickly entered through a gate, at which point Siri ran towards and pounced on him, giving him a huge hug that immediately brought him to the ground. It was a scary sight initially, as Siri pounced on him with the quickness an attack, until the moment of contact when their affection for one another burst into full view.

After just a few moments, Siri looked up and paced the fence along the line of onlookers before darting into the back of the enclosure where she jumped around on a tree. Dan was there with her playing and talking to her. Siri jumped erratically and Dan continued to encourage her to eat her meat. We all looked on quietly, and though we – volunteers, anthropologist, and trackers – stood still and silent I couldn't help but feel a bit of tension in the air, and I felt it coming from my tracking interlocutors. There was no reason for me to think this and I felt a bit uncomfortable

with myself. After a bit of time, just before Dan exited the enclosure, the four trackers walked off quietly talking to themselves, shaking their heads. That evening we sat around a fire and the trackers told stories about lions.

When the trackers and I left Dan's camp the next day, I asked them if they were trying to say something to Dan about Siri in the stories they told and they all started laughing. "Yes!" Karoha said. "But I think that man will be ok because he and the lion think they are the same. But that lion will kill other people. That lion wants to kill us."

/Uasi interjected with an angry laugh, "Those people used to kill our people. That man mustn't do that!" As we continued to speak about Siri, I mentioned that I thought I sensed something was wrong. They responded that Siri recognized them from times when people used to walk through these parts hunting, and she wanted to kill them, and that I was right to sense this tension. /Uasi and Karoha were alluding to two different kinds of sameness here. The first, a new, or different kind of sameness, in which Dan and Siri have formed a direct kin-like relation with one another. The second being the kind of sameness through which lions and people in the Kalahari recognize each other from their shared histories of hunting in shared landscapes. The second, makes the first especially dangerous, and vice versa.

I ran into Dan a few weeks later and recounted this experience. Dan was eager to tell me that he had never seen Siri act the way she did that day and could not explain why. She was frantic, and quite frankly, Dan said, he was a bit nervous about how she was behaving. He said that the best way he could describe her behavior was to say she was scared, but aggressively so. He was confused by this because people come to see him with Siri regularly, and there was nothing different about the day we visited. We all stood there in the same way, but Siri, Dan said, seemed to be specifically reacting to the trackers as if she recognized them. He could see that they were the ones she was scared of, but was confused by this because they were standing outside the fence just like everyone else. She had no reason to be more scared of them than anyone else.

## CONCLUSION

When we talk about the Anthropocene, we often hear about the growing environmental crises and mass species extinctions, and how it is increasingly important to consider and engage with the life-worlds of more-than-humans and



their ecologies. In doing so, it is tempting to rely on particular orderings, or epistemologies, to assess these things in scientific terms. This is important, but we need more than just this. How can we engage with the reconfiguration of more-than-human social and material relations that work with but might escape the logics of such orderings? Like trackers who count but also feel lions in their bodies. Why are some modes of detecting privileged while others are considered invalid? I think there are really two different things that I am talking about here: two things that I am holding apart, but trying to bring together. The first point is about “different differences” and “different samenesses” and how they live together, collide, and are dangerous, but can also be generative. Here I am talking about the trackers’ and Dan’s different affective relationships to lions in general *and* with a specific lion, and the dangers that come with them when those relationships are reconfigured, rearticulated, and come to do different things in the world. The second point has to do with how these differences work together and what this means in terms of things like species extinction, wildlife conservation and the like: That is, what are the politics of what counts as countable? The trackers are counters of animals but their relationships with animals are more than as counters. And they occupy these different relationships without hesitation. They do not want to count lions by tingling armpits.

Here, there are generative spaces where ontological differences meet through shared practice, that do not require focusing on incommensurabilities, or assuming translation and true equivocation are possible. Instead, we might follow moments of what Helen Verran describes as “epistemic disconcertment:” in which a “take-for-granted account of what knowledge is has been upset or impinged upon” as happened when my trackers urged me to drive out of harm’s way because of their tingling armpits (Verran 2013:144). But, perhaps we might need to think about moments of ontological, or even ontic, disconcertment, where what is real and our own material sensibilities are impinged upon, which I think resonates with the discomfort I felt when I realized Siri recognized the trackers despite never having met them before. To be a bit tongue in cheek, perhaps we need to engage with not-difference, but knots of different differences. Not the nonsecular or the secular, but different nonseculars and different seculars, and their different differences.

## REFERENCES

- Guenther, Mathias. 1999. *Tricksters and Trancers: Bushman Religion and Society*. First Edition. Bloomington: Indiana University Press.
- Livingston, Julie. 2016. "Cattle/Beef – Health, Desire, and the Problem of Self-Consuming Growth in Botswana". Workshop paper, Measures of Future Health Workshop, Berlin
- Verran, Helen. 2013. Engagements between Disparate Knowledge Traditions: Toward Doing Difference Generatively and in Good Faith. In *Contested Ecologies: Dialogues in the South on Nature and Knowledge*. Green. L (ed). Cape Town: HSRC Press: pp. 141–61.

MAYANTHI L. FERNANDO

FLORA, FAUNA . . . AND THE FABULOUS?

Supernatural Hauntings in a NatureCulture World<sup>1</sup>

I never thought much about ghosts until my cat Hoppy died.

Like most cats, Hoppy always loved to stick her paw in my water glass and then knock it over. She also loved to topple vases so she could eat the flowers. One day in July 2016, I came home with a small bunch of flowers, which I put in a water glass and left on my bedside table. A few hours later, as I was sitting in my living room, I heard a crash and went to investigate. The water glass had been knocked over and flowers were strewn on the floor. Hoppy was nowhere to be found, but it was clearly her doing.

Hoppy was nowhere to be found because she was dead. Four days earlier, as she lay in my lap in that same apartment, I had watched her eyes go dull and felt her body go limp as her life left it. I had bought the flowers as an offering to some vague notion of her spirit. But, much to my surprise, and despite being dead, there she was again, in immaterial and invisible form, overturning a water glass to claim her flowers.

This paper is an attempt to think through that moment when multiple things I knew to be true – It’s Hoppy; but she’s dead. It’s her ghost<sup>2</sup>; but ghosts aren’t real – collided. In that moment, my own secular-modern sensibilities and my understanding of reality were shaken, and they have not quite stabilized. So this paper, rather than a cohesive whole with a developed argument, is a series of explorations, and very much a thought experiment.

Dipesh Chakrabarty has aptly noted that the secular academy has “problems in handling practices in which gods, spirits, or the supernatural have agency in the

---

<sup>1</sup> A version of this essay was presented at the Nonsecular Anthropocene conference in Copenhagen in June 2017. Parts of this essay have also appeared as “Secularism and the Animist Indigene” (Fernando 2017a) and “Supernatureculture” (Fernando 2017b).

<sup>2</sup> I’m using the term *ghost* here as shorthand to mean an ontological presence – a being-ness – after material life has ended. I don’t really have any other vocabulary. I suppose *spirit* could work too, perhaps even better.

world” (2000: 72). This is in large part because it remains tethered to the notion that humans are the only agents, a position Charles Taylor in *A Secular Age* (2007) called exclusive humanism and identified as a crucial component for the emergence of secularity. Exclusive humanism itself was made possible, Taylor writes, by “a new sense of the self and its place in the cosmos: not open and porous and vulnerable to a world of spirits and powers, but what I want to call ‘buffered’” (27). The pre-secular “enchanted world, in contrast to our universe of buffered selves and ‘minds’, shows a perplexing absence of certain boundaries which seem to us essential” (33). Thus secularity is anchored by an exclusive focus on human flourishing, where the human is understood as bounded or buffered, unlike the porous self of the previous enchanted world that was open to “extra-human agencies” (32).

The new political and scholarly focus on the Anthropocene seems to be destabilizing exclusive humanism and its bounded human, making us aware of what Amitav Ghosh calls “the urgent proximity of nonhuman presences” (2016: 5). A plethora of what I will call, acknowledging that it is a contested term, post-humanist scholarship – non-representational theory, the ontological turn, new animism studies, indigenous studies, multispecies and animal studies, new ecologies, and certain trends in STS – has sought to present humans as always already in relation to nonhumans, to recognize the agency of nonhumans and things, and to conceive of human flourishing as deeply entangled in the flourishing of nonhuman worlds. In re-emphasizing the porosity of human subjects and their vulnerability to and dependence on nonhuman actors (or agents) – in re-emphasizing symbiosis and entanglement – post-humanism might be understood as a post-secular project, an attempt to undo the exclusive humanism integral to secularity. Thinkers like Isabelle Stengers (2012), Anna Tsing (Tsing et al. 2017), and Marisol de la Cadena (2015) explicitly understand their work this way. De la Cadena, for instance, wants to move beyond a secular age in which human agency hinges on “the separation between ‘Nature’ and ‘Humanity’” (de la Cadena 2010: 342). But hers and other attempts to re-entangle the human and the nonhuman and to recognize the agency of nonhumans, even as they disrupt certain key elements of secularity, tend to privilege others. De la Cadena gestures to, but does not pursue, the way that nonhumans were divided between *two* spheres, Nature and something else she doesn’t name, but would go under the sign of the “Supernatural.” In other words, the modern conception of humanity was based on a distinction not only with the natural (the realm of scientific

fact) but with the supernatural too (understood as metaphysical or symbolic phenomena). Secular-modern Man emerged as Man by freeing himself from entanglements with both natural and supernatural worlds. As Thomas Hobbes wrote in *Leviathan*, Man cannot make Covenant – cannot make the social and political order – with either brute beasts or God (Hobbes 2009 [1651]: 197).

Yet recent attempts to make Covenant with other-than-humans and to re-entangle Man as a being always in relation seem to welcome the presence of the “natural” and to falter at the presence of the “supernatural.” Consider Ghosh again. What does he mean by the “urgent proximity of nonhuman presences”? He takes us to the Sundarbans, the massive mangrove forest in the low-lying Bengal Delta, now seriously threatened by climate change and rising sea levels. “In the Sundarbans,” he writes, “tigers are everywhere and nowhere. Often when you go ashore, you will find fresh tiger prints in the mud, but of the animal itself you will see nothing ... Yet you cannot doubt, since the prints are so fresh, that a tiger is somewhere nearby; and you know that it is probably watching you” (Ghosh 2016: 28). He then turns to a Sundarbans folk epic that tells of a meeting between a tiger and a boy called Dukhey: “To look into the tiger’s eyes is to recognize a presence of which you are already aware; and in that moment of contact you realize that this presence possesses a similar awareness of you, even though it is not human” (29). Ghosh writes that this moment has something of the uncanny about it, “an irreducible element of mystery.” Moreover, he continues, “It is surely no coincidence that the word *uncanny* has begun to be used ... in relation to climate change ... to express ... the strangeness of what is unfolding around us. For these changes are not merely strange in the sense of being unknown or alien; their uncanniness lies precisely in the fact that in these encounters we recognize something we had turned away from: that is to say, the presence and proximity of nonhuman interlocutors” (30). What all this suggests, he concludes, is “that there are entities in the world, like forests, that are fully capable of inserting themselves into our processes of thought,” and “that conversations among ourselves have always had other participants” (ibid.).

What is interesting in Ghosh’s discussion of nonhuman participants in our worlds is that the tiger in the folk tale who encounters the boy Dukhey – Ghosh’s primary example from which he spins this tale of human-nonhuman relating – is actually a tiger *demon*, Dokkhin Rai. The demon had already made an earlier appearance in Ghosh’s novel *The Hungry Tide*, also set in the Sundarbans. There,

Dokkhin Rai is mentioned early in the book as “a powerful demon-king” who is defeated by Bon Bibi, a benevolent force who, in an act of mercy, leaves half the tide country to Dokkhin Rai and his demon hordes (2006: 86). *The Hungry Tide* ends with a catastrophic cyclone that brings two of the protagonists’ face to face with both death and a tiger – though if they are in Dokkhin Rai’s territory, is a tiger in the tide country ever simply a tiger? In fact, the storm itself may be the work of Dokkhin Rai. According to locals, “Whenever you have a storm like that – one that appears so suddenly out of nowhere – you know it’s the doing of Dokkhin Rai and his demons” (123). In *The Hungry Tide*, then, Ghosh seems to play with the entanglement of the natural and the supernatural, the cyclone and the demon-king, and to highlight their nexus precisely in the kind of cataclysmic climate events that become the basis for *The Great Derangement*.

*The Hungry Tide*, however, is a novel; though clearly the work of painstaking research on cyclones, dolphins, and the history of the Sundarbans, it remains fiction, and therefore less beholden to what we might call reality. In *The Great Derangement*’s invocation of Dokkhin Rai, Ghosh very quickly sets aside any nonsecular aspects of the Sundarbans folk tale, translating it into secular terms where nonhuman means tigers and forests, not tiger demons and other “supernatural” beings. That he does so entirely without comment – the tiger demon never appears again, replaced by “animals like the Sundarbans tiger” – demonstrates Chakrabarty’s point about the difficulty of dealing with nonsecular worlds in the academy. That Ghosh translates so quickly from nonsecular to secular terms in an attempt to re-conjure the unpredictable, miraculous, monstrous and uncanny aspects of what he calls Nature is particularly ironic, but indicative of secular commitments where the nonhuman slides easily into the natural.

Yet Ghosh also seems to know – even as he cannot quite fully admit – that he cannot disentangle the tiger and the tiger demon, the natural and the supernatural, and so, calling it the uncanny, he keeps conjuring forth the tiger-demon as integral to the stories he wants to tell about nonhuman presences and climate change. As he grasps for language to articulate the cyclone and climate change, it is to Dokkhin Rai he continually returns, only to then turn away. Dokkhin Rai doesn’t just haunt the Sundarbans; he haunts Ghosh too. Despite Ghosh’s best efforts to turn the tiger demon into a tiger, the demon keeps disrupting Ghosh’s story.

Ghosh, of course, is not the only one who finds it easier to write about tigers than about tiger demons. The academy has been much more open to accepting mountains (de la Cadena 2015), mosquitos (Mitchell 2002), and mollusks (Callon 1984) as actually existing beings and agential actors than it has ghosts, jinn, and other spirits. Anthropologist Tim Ingold writes easily of clouds, birds, rodents, fungi, animals, plants, humans, and stones as “gathering together the threads of life” (2014: 222). But the supernatural seems more difficult to include in expanded notions of life, personhood, and the more-than or other-than-human. Even in the recent *Arts of Living on a Damaged Planet*, one half of which is dedicated to ghosts and the other half to monsters who “unsettle *anthropos*,” the ghosts are strictly metaphorical. “Rather than imagining phantasms outside of natural history,” the editors write, “the monsters and ghosts of this book are observable parts of the world” (Tsing et al. 2017: M3). I’m not sure I could write a feline parallel to Donna Haraway’s dog manifesto (Haraway 2003) in which species companionship engaged not just my living cat but my dead one too, and remain intelligible to my peers.

Why this is so, I want to hazard, has something to do with secular-modern attachments to the material and the visible as the site of the real, attachments that continue to underpin the post-humanist turn. Read generously against the grain, however, certain strands of post-humanism can offer onto-epistemic horizons beyond the material and open us up to new worlds.

In her meditation on human-dog relations, Donna Haraway writes that there are “no pre-constituted subjects and objects.” Rather, “there are only ‘contingent foundations;’ bodies that matter are the result” (2003: 6). Dogs, she continues, “are about the inescapable, contradictory story of relationships—co-constitutive relationships in which none of the partners pre-exist the relating” (12). But how are we to read Haraway’s reference to matter? Can bodies matter in immaterial ways? Can immaterial beings also matter? The significance of Haraway’s argument seems to be the *relating*, where the materiality of dog is merely contingent, as contingent as the contingency of relating itself. But is this the case? Or does her argument assume material existence as the precondition for relating?

Feminist science studies scholar Karen Barad is useful to think with here. In *Meeting the Universe Halfway* (2007), she proposes that rather than taking our primary ontological units as “independent objects with independently determinate



boundaries and properties,” we think in terms of what Niels Bohr calls “phenomena,” which “are the *ontological* inseparability of agentially intra-acting components.” In contrast to interaction, “which assumes that there are separate individual agencies that precede their interaction,” Barad proposes the notion of intra-action, which “recognizes that distinct agencies do not precede, but rather emerge through intra-action” (Barad 2007: 33, original emphasis).

Phenomena is an interesting term, since it does not necessarily exclude non-material beings who, through their intra-action with other material and non-material beings, constitute both themselves and an entangled set of agencies. Phenomena would not need to take material form to be phenomena in Bohr’s own terms. But for Barad, materiality – the importance of matter as the ground of her claims – is simply assumed. She writes: “Phenomena do not require cognizing minds for their existence ... Phenomena are real material beings” (361). To think of existence beyond human representation and cognition remains anchored, it seems, to a materialist epistemology.

At the same time, Barad offers another way to think about materiality that emerges in a seeming slippage between phenomena as material beings and phenomena as having material effects. She follows her claim that phenomena are real material beings by noting: “What is made manifest through technoscientific practices is an expression of the objective existence of particular material phenomena ... Objectivity is a matter of accountability for what materializes, what comes to be” (361). What scientific practice does, Barad argues, is give expression to the objective existence of phenomena by attending to what materializes. But are material *effects* – “what materializes” – necessarily coextensive with material *beings*? One could argue that a cat ghost – the phenomenon of Hoppy-as-ghost – in knocking over a water glass produces a material effect (spilled water), and the spilled water – “what materializes” – objectively constitutes evidence for the phenomenon of a cat-ghost. Though I think I’m reading Barad against rather than with the grain, this interpretive framework nonetheless offers us the possibility of remaining within a materialist evidentiary regime, without necessarily demanding that we remain tied to a materialist ontology.

Barad ends *Meeting the Universe Halfway* with the brittlestar, an echinoderm closely related to the starfish. The brittlestar has bioluminescent arms that continue to move and emit light after breaking off from its main body, often distracting

predators to allow for escape. In a beautiful discussion of the brittlestar as both metaphor for and embodiment of how we might think entanglement and intra-action, Barad writes: “Is this jettisoned limb simply a piece of an organic-inorganic structure shuttering with remnant reflex energy or a companion species helping out? ... At what point does the ‘disconnected’ limb belong to the ‘environment’ rather than the ‘brittlestar’? Is contiguity of body parts required in the specification of a single organism? Can we trust visual delineations to define bodily boundaries? Can we trust our eyes?” “Connectivity,” Barad concludes, “does not require physical contiguity” (377).

This passage helps me think in new ways about a world of spirits and ghosts and other immaterial beings. Does my cat continue to exist after her body has been cast off and incinerated? Does she remain in-relation, a companion species in death as much as in life? Can we draw on Barad and other post-humanist scholars for inspiration in thinking about the intra-action constitutive of nonhuman spirits and humans, even as we ask why it seems so difficult, even counter-intuitive, to do so?

A counter-example of someone who ostensibly does attend to nonsecular beings might be helpful at this point, so let me return to Marisol de la Cadena’s work on *tirakuna*, whom she defines as “sentient beings made of earth and water” (2013: 59-60) or, elsewhere, “earth beings” (2015). De la Cadena wants, she writes, “to take seriously (perhaps literally) the presence in politics of those actors, which, being other than human, the dominant disciplines assigned to the sphere of nature (where they were to be known by science) or to the metaphysical and symbolic fields of knowledge” (2010: 336). By taking seriously, even literally, the presence of earth beings in politics, de la Cadena rightly wants to move beyond a notion of politics that hinges on “the separation between ‘Nature’ and ‘Humanity’” (342). But, as I noted earlier, she elides that other separation, between Humanity and the Supernatural. Just as the natural world had no business in politics – the domain of the human – neither did the supernatural. No covenant, remember, with beasts *or* God. In other words, man emerges as a political subject, as the subject of politics, in distinction to both the natural and the supernatural. How, then, might we re-entangle humans with nonhumans, and in the process rethink politics, without at the same time reinscribing this natural/supernatural distinction, and, in so doing, leaving the supernatural disentangled from a newly entangled natureculture?

Anthropologist Amira Mittermaier is one of a few people working on the presence of angels and other supernatural beings who undertake political action, in, for example, demonstrations against the Mubarak regime in pre-Revolution Egypt, or in dream visions that map onto political events in the past, present, and future. In an article called “Invisible Armies,” Mittermaier considers “the role of *invisible* actors in historical events” (Mittermaier 2012b: 392, original emphasis). Yet she seems to hesitate with regard to what she means by “role” and “actors.” Early on in the piece, she writes that she “cannot gauge the specific effects of supernatural actors in historical events.” Rather, she wants to analyze what dreams can do when they are told and re-told by their human dreamers. “What kinds of spaces for commentary and critique do dream stories enable?” she asks. “How do they reconfigure the very grounds of politics?” (393). This seems to side-step her initial attempt to think through “the role of invisible actors in historical events,” since historical and political effects take place only via the discourse and actions of human dreamers (through their “dream stories”). Mittermaier, then, takes spirits seriously as methodological realities but not ontological ones, to use a distinction drawn by Nils Bubandt (2009). In contrast to de la Cadena’s Andean world, the realm of politics in Egypt remains fundamentally human in Mittermaier’s telling. Mittermaier does not – perhaps *cannot*, or so I want to argue – take the politically and analytically radical step de la Cadena does in her work on earth beings. De la Cadena, remember, wishes “to take seriously (perhaps *literally*) the presence in politics of those actors” like *tirakuna* (2010: 336, my emphasis).

My discussion of Mittermaier’s excellent work is not meant as criticism, but rather as an invitation to ask whether de la Cadena is able to make that claim about *tirakuna* and remain intelligible and persuasive to a secular-modern scholarly audience in a way that Mittermaier – who would be “tak[ing] seriously (perhaps *literally*) the presence in politics” of angels and the Prophet Mohammed shaking hands with demonstrators at Tahrir Square – cannot. I think de la Cadena can remain intelligible and persuasive in talking about *tirakuna* as ontologically real political actors (and not just methodologically real ones) and Mittermaier probably could not were she to do the same, for a couple of reasons, which I would like to explore.

First, whereas Mittermaier's Muslim interlocutors are not usually seen as political allies with positive political and ethical models to offer, de la Cadena's indigenous interlocutors who are in relation with *tirakuna* engage in political projects that map onto secular-progressive ones. Though de la Cadena herself does not use the term, her work would fall under the umbrella of what Graham Harvey calls "the new animism," whereby personhood encompasses "rocks, trees, bears, and thunderclouds," all "other-than-human persons" (Harvey 2006: 12). Indeed, indigenous ontologies of entanglements between human and other-than-human worlds are increasingly held out as our best hope for living in the ruins of capitalism, climate change, and the Anthropocene. According to Danny Naveh and Nurit Bird-David, "'So-called 'primitive animism', once it is better understood in the way we suggest [i.e. as the "working of relationality"] can open another way of looking that can help us think about environmental crisis" (2014: 37). In an essay in Harvey's recent and comprehensive *The Handbook of Contemporary Animism*, Deborah Bird Rose discusses Australian philosopher Val Plumwood, who, before her death, had been grappling with animism in order to "start up a the major cultural rethink that she (like many others) believed was necessary," and to do so by "talk[ing]" with peoples who are now living within the kinds of understandings we are seeking" (2014: 145). Harvey puts this affective, intellectual, and political investment in indigenous knowledge most bluntly: "Researchers who learn among Amazonian indigenous people are, like [Philippe] Descola and [Eduardo] Viveiros de Castro, at the forefront of multi- and interdisciplinary debates. *The nature of the world, of humans and all life is at stake*" (2014: 75, my emphasis).

I am interested in the figure of the indigenous Animist at play in this kind of contemporary scholarship, and in the utopian, almost salvific hope for the future of humankind – indeed, the world – that this figure offers, and what this might have to do with the secular. To get there, I want to trace a partial genealogy of animism, one linked to the emergence of the concept of religion that some scholars argue defines the secular age (Asad 1993; Masuzawa 2005; Taylor 2007). As religion was increasingly defined as a discrete sphere and a distinct experience, a parallel category of not-quite- or not-yet-religion ran alongside it, comprised of practices that came in the 19<sup>th</sup> century "world religions" paradigm to be called animism, fetishism, shamanism, totemism, etc. Tomoko Masuzawa (2005) describes how that paradigm divided religions of the world between a progressive West that made history

(Christianity) and a venerable East that preserved it (Buddhism, Hinduism, Judaism, Islam, Confucianism – really, everything else but Christianity). But within this configuration, she writes, was a “tertiary group of minor religions ... considered lacking in history” altogether (4). The peoples of these small-scale tribal societies were thought to possess “an unusually tenacious historical memory, but not historical consciousness. On the strength of this assumption, these societies [were] relegated to a position in some sense before history or at the very beginning of history, hence, primal” (ibid.).<sup>3</sup> Mapped as primitive forms of religion, these “minor religions” were religion’s other side, certainly not the secular, but not quite religion either. This mapping continues into the present: many contemporary religion departments have courses on Hinduism, Buddhism, Christianity, Islam, Judaism, even Shintoism and Confucianism, but the rest – the “minor” traditions – are often grouped as “indigenous religions” or “religions of native North America.”

Interestingly, for nineteenth-century philosophers, philologists, and Orientalists even though the tertiary category of not-quite-religion was pre-historical and therefore “minor,” the very primal-ness of these minor religions made them valuable to think with about a series of universal truths. In nineteenth- and early-twentieth-century theories of man and the social, Masuzawa notes, “primitive tribal religions [were] ... expressions of some basic and natural human propensities and behaviors in the face of the mysterious and the superhuman” (17). Unlike these generic minor religions, the “great religions” were thought to be culturally and historically particular, as they were predicated on specific defining events and associated with specific historical personages (Jesus, the Buddha, Mohammed). Primitive religions gestured to the human universal, albeit in primordial form, in a way that “world religions” could not.

---

<sup>3</sup> See also Keane (2007). This tripartite division of the world is distinct from, but nonetheless clearly a reconfiguration of, the early modern system of classification in which there were three individually distinct religions (Christianity, Judaism, and Islam, with Christianity as the one true religion and the other two considered deviant forms) and a fourth category – the rest – that were “nations bereft of religion altogether. In effect, the last category comprised those who adhered to myriad substitutions for want of religion; lacking the knowledge of the Deity, they venerated pseudodeities, or idols” (Masuzawa 2005: 60). As the new concept of “world religions” emerged, the list of “proper” religions expanded but this category of “the rest” – not-quite-religion – never quite disappeared since, I would argue, it was key to the very notion of “world religions” itself, as its other.

There are two threads I want to pull at here. The first concerns the logic of universal versus particular that structures the distinction between animism (and other minor religions), and “great” non-Christian religions like Islam or Hinduism. Although the new animism has cast aside an earlier explicitly evolutionary frame, it nonetheless seems to have brought with it the old ascription of universality to the Animist Indigene. For most scholars, indigenous knowledge and indigenous ontologies of relationality are not simply one way to be: they are, simultaneously, the best way we could live and the real way we do live (even though we secular moderns may not recognize it). As Deborah Bird Rose has put it, the capacious indigenous notion of “kinship is the way of life on earth” (2014: 145). It is difficult to imagine secular-modern scholarship making such universalist claims on the basis of the major “world religions,” besides Christianity, that is – but that’s another story.

The second thread is related to this first one. In a world in which the secular continues to define itself against religion proper (the “world religions” of Islam, Christianity, Hinduism, Judaism, etc.), not-quite-religions like animism can become an easier site of recuperation and even redemption for secular moderns trying to think and live beyond the stale confines of the conventionally secular.<sup>4</sup> In a recent essay, Vincent Lloyd (2017) asks whether the embrace of indigeneity on the political left is an attempt to “push against the imperative to exclude or manage religion, and particularly the normativity of religion, in a spiritual-but-not-religious era.” In a secular age where “individuals are atoms,” he continues, “indigeneity embraces the pull of local community and tradition.”<sup>5</sup>

---

<sup>4</sup> I wonder too, how the tri-partite division between the Secular, Religion, and Not-Quite-Religion maps onto that other tri-partite division between Humanity, the Supernatural, and Nature. As Asad writes, “religion” and “nature” emerged around the same time as universal categories, and in ways that were intertwined: “From early modern Europe—through what is retrospectively called the secular Enlightenment and into the long nineteenth century, within Christian Europe and in its overseas possessions—the things, words, and practices distinguished or set apart by ‘Nature Folk’ were constituted by Europeans as ‘fetish’ and ‘taboo.’ What had been regarded in the sixteenth and seventeenth centuries in theological terms as ‘idolatry’ and ‘devil-worship’ (devotion to false gods) became the secular concept of ‘superstition’ (a meaningless survival) in the framework of eighteenth- and nineteenth-century evolutionary thought” (2003: 35). What I am interested in is the seeming distinction between the supernatural and the superstitious.

<sup>5</sup> Lloyd and I are both interested not so much in indigenous activism itself (which has a much longer history and draws from a different set of nonsecular traditions) than in the recent embrace of indigeneity as a moral, political, and cultural paradigm by non-indigenous secular moderns.

And here's where things get rather weird – and interesting. This search for redemption and meaning amidst the alienation of the secular and in the catastrophic wake of the Anthropocene, and the way in which the new animism has become a descriptive and prescriptive model for living in the world with others, in many ways mirrors the dominant understanding of what *religion* has been in the secular imagination. It is commonplace for secular moderns to see religious revivalism as the search for existential comfort in times of uncertainty, just as it is common for them to understand religion as both an explanation of the world and an ethic for living in it. At the end of the world as they know it, then, some secular moderns seem to have found in indigenous animism religion as they themselves defined it for a secular age.

Let me remind readers of the question for which that discussion of animism was one possible answer: why can Marisol de la Cadena's claim to "take seriously (perhaps literally), the presence in politics" of *tirakuna*, earth beings make sense – be compelling and persuasive, even – in a way that Mittermaier's likely would not were she to make the same claim about angels, jinn, and dream-visions? I now want to work through a different answer. I think it matters that *tirakuna* are "made of earth and water" (de la Cadena 2013: 59-60), that they take visible, material form, or form that is recognizable via ocular perception as material. The *tirakuna* thereby become real in a way that angels and dream-visions are not. This materialist epistemology – which I elaborated in my earlier discussion of Karen Barad – makes it difficult to account for the presence of creatures like jinn (who remain formless and invisible until they choose to make themselves perceptible to certain humans) and angels (who are also not perceptible to all). Add to this the modernist re-organization of the senses, and the hegemony of the eye as the primary organ of perceiving and knowing – what Charles Hirschkind has called "a modernist ocularcentric epistemology" (2006: 18) – and one begins to better understand the relationship between the visible and the real that emerges with the Enlightenment and continues to endure.<sup>6</sup>

---

<sup>6</sup> Hirschkind writes that the "politics, ethics, and epistemologies that defined the Enlightenment project were deeply entwined with a set of assumptions regarding the relative values of the senses" (2006: 13). Although he is interested in the ear and aural epistemologies of the Islamic tradition – the practices of "recitation, audition, and memorization at the heart of traditional Islamic pedagogies" (15) – his point is valuable for thinking about the senses more generally. Nadia Seremetakis (1994a; 1994b) has also written on modernity and its re-organization of sensory regimes.



Once again, though, Barad is both a way into and out of that materialist epistemology. Recall her formulation: “Is contiguity of body parts required in the specification of a single organism? Can we trust visual delineations to define bodily boundaries? Can we trust our eyes?” Barad’s reference to trusting our eyes at once invokes a modernist occularcentric epistemology and undercuts it. “Connectivity,” she concludes, “does not require physical contiguity” (2007: 377). In other words, no, we cannot, in fact, trust our eyes. Or rather, we cannot trust only our eyes.

My point is that human perception cannot define the bounds of the universe (or multiverse). Indeed, wouldn’t a true post-humanism entail the possibility of modes of existence that we humans simply cannot know because they remain inaccessible to our common sensory perception, as well as the possibility of mutual multi-species entanglements and shared worlds that do not include – and are hidden – to us humans? It turns out, for example, that cats, like many nonhuman animals, can see in ultra-violet, a light spectrum invisible to humans. So, as an article on this phenomenon put it, “a house cat’s bizarre antics may be more than just feline folly. The kitty may be seeing things that the human eyes can’t” (Lewis 2014). In a description of jinn, which he describes as “sentient organisms of so fine a nature and of a physiological composition so different from our own that they are not normally accessible to our sense-perception,” the late, great scholar of Islam Muhammad Asad writes, “if we assume, as we must, that there are living organisms whose biological premises are entirely different from our own, it is only logical to assume that our physical senses can establish contact with them only under very exceptional circumstances; hence the description of them as ‘invisible beings’” (in Lebling 2010: 4).

Indeed, jinn are particularly compelling to think with about multispecies worlds. In Islamic theology and cosmology, jinn are a separate species of being, different from and older than humans. They are made of smokeless fire and are generally imperceptible to humans, though jinn can perceive humans and intervene in their lives. Jinn mate and procreate, though they do not have the same biology and anatomy of humans. Interestingly, the Quran is addressed to both humans and jinn (ethical action is therefore already multispecies), and some jinn still alive today are counted among the *sahaba*, the companions of the Prophet Muhammad, and were there to hear his recitation of the Quran. Anand Vivek Taneja, whose recent book

*Jinnealogy* explores interactions between humans, animals, and jinn-saints in an old 14<sup>th</sup>-century fort in Delhi, India, writes that because the temporalities of jinn do not correspond to human time, jinn can transmit “knowledge and traditions beyond all possibility of human memory” (2018: 43). He calls the jinn “a voice that speaks of other relations to the past: the past not just as what was but what could have been, and could be again; ... as full of concepts and potentialities for *life*, for the present and the future” (3, original emphasis). Taneja sees that present and future life as one of multispecies kinship. In fact, the line between jinn and animals is blurry: “jinn are renowned to be shape-shifters,” he writes, and many of the birds and animals, especially the cats and snakes who inhabit the fort, are seen as embodying the jinn-saints (14).

Work on cryptozoological species, or cryptids, is also instructive.<sup>7</sup> Cryptids are “categories of animals which some groups of humans considers real but are not attested, or have yet to be attested, by international zoology” (Forth 2017: 32). For most cryptozoologists, cryptids are generally either unknown species of animals, or those that are thought to be extinct but have actually survived into modern times. As Stephanie Turner argues, because these animals are “known only indirectly [through what is commonly called myth, superstition, or local knowledge], merely suspected to exist, or somehow surviving the vicissitudes of modernity, the distinct agency of these animals challenges humans who attempt to situate them in time and place” (2017: 13). Like jinn, cryptids occupy a realm of the unseen, escaping human perception (though not necessarily the capacity for human perception). And while zoologists consider cryptozoologists illegitimate as scientists (because their entire enterprise is speculative rather than empirically grounded), it’s worth remembering the (former) cryptids that turned out to be real: the Komodo dragon, thought by Europeans to be a mythical beast until its “discovery” by scientists in 1926; and the coelacanth, a survivor from 80 million years ago known as the “living fossil fish,” found in 1938 in the waters near the Comoros Islands. As for the “devil bird,” only heard and never seen in the jungles of Sri Lanka but whose bloodcurdling shrieks are thought by locals to foreshadow death, cryptozoologists have proposed multiple likely candidates: the forest eagle-owl, the crested honey buzzard, and the Ceylon

---

<sup>7</sup> I thank Samantha Hurn, a fellow participant at the Nonsecular Anthropocene conference, for bringing my attention to the weird and wonderful field of cryptozoology. See Hurn (2017).

highland nightjar. However, the bird – or whatever it is – remains unseen by any of the humans involved, local or scientist.

The Golden Snail Opera is a “multispecies choreography” in which, through video and text, various beings on a rice field on Taiwan’s Lanyang Plain “offer their enactments of living in common” (Tsai et al. 2016: 521). The speaking characters in the opera are the Farmer (who has taken up farming practices friendly to other species), the Pedant (who explains the story in rational-scientific terms), and the Wanderer, “a roaming ghost” whose living life was ended by American bombs during World War II. The accompanying film<sup>8</sup> features the perspectives of a snail, a dog, and humans. In the on-stage performance of the opera, the roaming ghost intrudes on the humans, standing in front of them and nudging them, but the Pedant sees and hears nothing, and the Farmer only feels its presence as cold air on the back of her neck (“It’s a hot day here, yet I feel cold air on my neck. Maybe it’s sweat, but I think it’s the ghosts. I feel their presence” (Tsai et al. 2016: 524)).

The opera raises a number of questions for me: Can the dog and the snails know – “see” – the ghost in ways humans cannot? There is a moment in the film when the dog with a camera mounted on his back suddenly pauses, mid-gambol, and looks intently at something in the field: what might he be seeing that we do not? Could we retrain our modernist sensory capacities to perceive the ghost, drawing on existing traditions that discipline the body/mind to embrace porosity? Like the cryptids, do some of those capacities endure unbeknownst to us, sparked momentarily – but then quickly re-buried – by the appearance of cat ghosts and the like? And how might we let ourselves linger longer in those capacities? Might we think of those capacities as a kind of subjugated knowledge (Foucault 1980)? Given their nonhuman memories, might the jinn be practitioners and transmitters of that knowledge? Might they have something to teach us?

“It seems difficult,” the Golden Snail Opera concludes, “to ban ghosts from the annals of those *doing* natural history, as well as of those being observed ... This, of course, messes with European Enlightenment notions of nature, but isn’t that part of the point?” (Tsai et al. 2016: 536). Indeed. And might the work of undoing the distinction between nature and culture, of messing with modernist notions of nature

---

<sup>8</sup> <https://vimeo.com/188367219>

to think in terms of natureculture, help us to do the same with supernature? Might natureculture be better termed supernatureculture?

Before ending, a word about terminology: When I first gave this paper, I titled it “Flora, Fauna, and the Fabulous.” According to various dictionary definitions, *fabulous* means “resembling or suggesting a fable”; “almost impossible to believe”; “incredible”; “purely imaginary”; “not existing in real life”; but also “unusual; marvelous; superb”.

My students – Jessica Madison, Joe Klein, Zahirah Suhaimi, and Jon Nyquist – and I came up with *fabulous* to replace *supernatural* during a graduate seminar in early 2016. We found the latter term too loaded, too ensconced in both the tripartite division of the world into Nature, Humanity, and the Supernatural and the subsequent sense that the super-natural was not simply not-natural but also not-real. But my use of *fabulous* is also a nod to Saidiya Hartman’s (2008) call for “critical fabulation” when faced with an archive – or the lack thereof – that denies the possibility of certainty. Though Hartman is thinking and writing about the very different context of slavery, I find her call to move beyond “archival empiricism toward the unverifiable” (Kazanjian 2016: 134) good to think with regard to other fields, too. Critical fabulation is a call to move beyond our epistemological attachment to the material and the empirical as the site of the real in our telling of stories. Nonetheless, I have become unsatisfied with *fabulous* as a replacement for *supernatural*. It feels too whimsical for the hard work of disruption and destabilization required to think beyond conventional categories. I am equally unsatisfied with supernatureculture. I find that the re-suturing I intend by it shows its seams, marking too clearly and too discretely the categories of nature, culture, and supernature meant to be undone, blurred, re-thought. This brief discussion of terms that I have used, yet may well need to discard, is meant simply to point up the difficulty of terminology in this project to think beyond the bounds of our secular-modernist sensibilities, to think not only tigers and forests, but tiger demons and cat ghosts too.

I end with a coda to the story of my cat with which I began. The second time I told that story in public was at the Nonsecular Anthropocene conference, for which I

wrote this paper. As I prepared to present the paper, I got myself a glass of water, set it on the table, and sat down to adjust my microphone. Before I could begin, my glass overturned, spilling water everywhere. In other words, my opening anecdote about the ghost of my dead cat overturning a water glass was immediately preceded by the unexpected overturning of a water glass.

Make of that what you will.

## REFERENCES

- Anidjar, Gil. 2006. "Secularism." *Critical Inquiry* 33(1): pp. 52–77.
- Asad, Talal. 1993. *Genealogies of Religion: Discipline and Reasons of Power in Christianity and Islam*. Baltimore: Johns Hopkins University Press.
- . 2003. *Formations of the Secular: Christianity, Islam, Modernity*. Palo Alto: Stanford University Press.
- Barad, Karen. 2007. *Meeting the Universe Halfway: Quantum Physics and the Entanglements of Matter and Meaning*. Durham: Duke University Press.
- Bubandt, Nils. 2009. "Interview with an Ancestor: Spirits as Informants and the Politics of Possession in North Maluku." *Ethnography* 10(3): pp. 291–316.
- de la Cadena, Marisol. 2010. "Indigenous Cosmopolitics in the Andes: Conceptual Reflections beyond "Politics". " *Cultural Anthropology* 25(2): pp. 334–370.
- . 2013. About "Mariano's Archive": Ecologies of Stories. In *Contested Ecologies: Dialogues in the South on Nature and Knowledge*. Lesley Green, ed. Cape Town: HSRC Press: pp. 55–68.
- . 2015. *Earth Beings: Ecologies of Practice across Andean Worlds*. Durham: Duke University Press.
- Callon, Michel. 1984. "Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St. Brieuc Bay." *The Sociological Review* 32(S1): pp. 196–233.
- Chakrabarty, Dipesh. 2000. *Provincializing Europe: Postcolonial Thought and Historical Difference*. Princeton: Princeton University Press.
- Fernando, Mayanthi. 2017a. "Secularism and the Animist Indigene." *The Immanent France: Secularism, Religion, and the Public Sphere*. <https://tif.ssrc.org/2017/07/27/secularism-and-the-animist-indigene/>, accessed July 18, 2018.
- . 2017b. "Supernatureculture." *The Immanent France: Secularism, Religion, and the Public Sphere*. <https://tif.ssrc.org/2017/12/11/supernatureculture/>, accessed July 18, 2018.
- Forth, Gregory. 2017. Cryptids, Classification and Categories of Cats: An Ethnozoological Study of Unidentified Felids from Eastern Indonesia. In *Anthropology and Cryptozoology: Exploring Encounters with Mysterious Creatures*. Samantha Hurn, ed. London: Routledge: pp. 32–53.
- Foucault, Michel. 1980. *Power/Knowledge: Selected Interviews and Other Writings, 1972-1977*. Colin Gordon, ed. Colin Gordon, Leo Marshall, John Mepham, and Kate Soper, trans. New York: Pantheon Books.

- Ghosh, Amitav. 2006. *The Hungry Tide*. Boston: Houghton Mifflin Harcourt.
- . 2016. *The Great Derangement: Climate Change and the Unthinkable*. Chicago: University of Chicago Press.
- Haraway, Donna. 2003. *The Companion Species Manifesto: Dogs, People, and Significant Otherness*. Chicago: Prickly Paradigm Press.
- Hartman, Saidiya. 2008. "Venus in Two Acts." *Small Axe* 26: pp. 1–14.
- Harvey, Graham. 2006. "Animals, Animists, and Academics." *Zygon* 41(1): pp. 9–20.
- . 2014. Introduction to "Dwelling in Nature/Culture." In *The Handbook of Contemporary Animism*. Graham Harvey, ed. London: Routledge: pp. 75–76
- Hirschkind, Charles. 2006. *The Ethical Soundscape: Cassette Sermons and Islamic Counterpublics*. New York: Columbia University Press.
- Hobbes, Thomas. 2009. *Leviathan*. Oxford: Oxford University Press.
- Hurn, Samantha. 2017. *Anthropology and Cryptozoology: Exploring Encounters with Mysterious Creatures*. London: Routledge.
- Ingold, Tim. 2014. Being Alive to a World without Objects. In *The Handbook of Contemporary Animism*. Graham Harvey, ed. London: Routledge: pp. 213–225.
- Kazanjian, David. 2016. "Freedom's Surprise: Two Paths through Slavery's Archives." *History of the Present* 6(2): pp. 133–145.
- Keane, Webb. 2007. *Christian Moderns: Freedom and Fetish in the Mission Encounter*. Berkeley: University of California Press.
- Lebling, Robert. 2010. *Legend of the Fire Spirits: Jinn and Genies from Arabia to Zanzibar*. Berkeley: Counterpoint.
- Lewis, Tanya. 2014. "Cats and Dogs May See in Ultraviolet." *LiveScience*. <https://www.livescience.com/43461-cats-and-dogs-see-in-ultraviolet.html>, accessed October 29, 2017.
- Lloyd, Vincent. 2017. "Is the "Native" Secular?" *The Immanent France: Secularism, Religion, and the Public Sphere*. <https://tif.ssrc.org/2017/06/01/is-the-native-secular/>, accessed October 29, 2017.
- Masuzawa, Tomoko. 2005. *The Invention of World Religions: Or, How European Universalism Was Preserved in the Language of Pluralism*. Chicago: University of Chicago Press.
- Mitchell, Timothy. 2002. *Rule of Experts: Egypt, Techno-Politics, Modernity*. Berkeley: University of California Press.



- Mittermaier, Amira. 2012a. "Dreams from Elsewhere: Muslim Subjectivities beyond the Trope of Self-Cultivation." *Journal of the Royal Anthropological Institute* 18(2): p. 247–265.
- . 2012b. "Invisible Armies: Reflections on Egyptian Dreams of War." *Comparative Studies in Society and History* 54(2): pp. 392–417.
- Naveh, Danny, and Nurit Bird-David. 2014. Animism, Conservation and Immediacy. In *The Handbook of Contemporary Animism*. Graham Harvey, ed. London: Routledge: pp. 27–38.
- Rose, Deborah Bird. 2014. Death and Grief in a World of Kin. In *The Handbook of Contemporary Animism*. Graham Harvey, ed. London: Routledge: pp. 137–147.
- Seremetakis, C. Nadia. 1994a. The Memory of the Senses, Part I: Marks of the Transitory. In *The Senses Still: Perception and Memory as Material Culture in Modernity*. C. Nadia Seremetakis, ed. Chicago: University of Chicago Press: pp. 1–18.
- . 1994b. The Memory of the Senses, Part II: Still Acts. In *The Senses Still: Perception and Memory as Material Culture in Modernity*. C. Nadia Seremetakis, ed. Chicago: University of Chicago Press: pp. 23–43.
- Stengers, Isabelle. 2012. "Reclaiming Animism." *E-Flux* 36. <http://www.e-flux.com/journal/36/61245/reclaiming-animism/>, accessed November 4, 2017.
- Taneja, Anand Vivek. 2018. *Jinnealogy: Time, Islam, and Ecological Thought in the Medieval Ruins of Delhi*. Stanford: Stanford University Press.
- Taylor, Charles. 2007. *A Secular Age*. Cambridge: Belknap.
- Tsai, Yen-Ling, Isabelle Carbonell, Joelle Chevrier, and Anna Lowenhaupt Tsing. 2016. "Golden Snail Opera: The More-than-Human Performance of Friendly Farming on Taiwan's Lanyang Plain." *Cultural Anthropology* 31(4): pp. 520–544.
- Tsing, Anna, Heather Swanson, Elaine Gan, and Nils Bubandt. 2017. Introduction: Haunted Landscapes of the Anthropocene. In *Arts of Living on a Damaged Planet*. Minneapolis, MN: University of Minnesota Press.
- Turner, Stephanie S. 2017. *The Place of Cryptids in Taxonomic Debates*. In *Anthropology and Cryptozoology*. Samantha Hurn, ed. London: Routledge: pp. 12–31.
- Willerslev, Rane. 2007. *Soul Hunters: Hunting, Animism, and Personhood among the Siberian Yukaghirs*. Berkeley: University of California Press.