

...one cannot "unsettle" the "coloniality of power" without a redescription of the human outside the terms of our present descriptive statement of the human, Man.
Sylvia Wynter

MORE-THAN-HUMAN PARTICIPATORY RESEARCH

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Tehseen Noorani and Julian Brigstocke



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CONNECTED COMMUNITIES

Foundation Series

Today we are increasingly seeing calls for universities to collaborate with communities in designing and conducting research. While such calls are to be welcomed they tend to suffer from a historical blind-spot that ignores the fact that research collaboration – partnerships, participation (call it what you will) – is a deep and powerful research tradition that dates back beyond the recent emergence of calls for ‘co-produced’ knowledge.

This series of reviews developed as part of the AHRC’s Connected Communities Programme, sets out to make visible some of these traditions of collaborative research. In doing so, the series aims to:

- help those who are new to the field to understand the huge wealth of history and resources that they might draw upon when beginning their own research collaborations;
- help those who seek to fund and promote collaborative research to understand the philosophical and political underpinnings of different traditions; and
- support those working in these traditions to identify points of commonality and difference in their methods and philosophies as a basis for strengthening the practice of collaborative research as a whole.



Research collaboration is a deep and powerful research tradition that dates back beyond the recent emergence of calls for ‘co-produced’ knowledge.



The eight reviews in the series were developed to provide eight very different 'takes' on the histories of collaborative research practices in the arts, humanities and social sciences. They do not pretend to be exhaustive, but to provide a personal perspective from the authors on the traditions that they are working within. As we worked together as a group to develop these, however, a number of commonalities emerged:

1. A critique of the mission-creep of scientific knowledge practices into the social sciences and humanities, and of the claims to produce universally valid forms of knowledge from specific limited institutional, cultural and social positions.
2. A commitment to creating research practices that enable diverse experiences of life and diverse knowledge traditions to be voiced and heard.
3. A resistance to seeing research methods as simply a technocratic matter; recognising instead that choices about how, where and with whom knowledge is created presuppose particular theories of reality, of power and of knowledge.
4. A commitment to grapple with questions of power, expertise and quality and to resist the idea that 'anything goes' in collaborative research and practice. There are better and worse ways of developing participation in research practice, there are conditions and constraints that make collaboration at times unethical.

At the same time, a set of names and events recur throughout the reviews: John Dewey, Paolo Freire, Raymond Williams, Donna Haraway appear as theorists and practitioners who provide powerful philosophical resources for thinking with. Critical incidents and moments reappear across the reviews: the rise of anti-colonial movements in the 1950s and 1960s, of second wave feminism and critical race theory in the 1960s and 1970s; of disability rights movements in the 1970s and 1980s; of post-human and ecological analyses in the 1990s and 2000s. Read as a whole, these reviews demonstrate the intellectual coherence and vibrancy of these many-threaded and interwoven histories of engaged scholarship and scholarly social action.

The first of the reviews, by **Kevin Myers** and **Ian Grosvenor**, discusses the long tradition of 'history from below' as a collaborative enterprise between researchers, archivists, curators, teachers, enthusiasts, local historians, archaeologists and researchers. They discuss the emergence of the 'professional historian' alongside the rise of the nation state, and the way in which this idea was challenged and deepened by the emergence of activist histories in the mid-20th century. They investigate the precedents set by the rise of groups such as the History Workshop movement and trace their legacies through a set of case studies that explore feminist histories of Birmingham, disabled people's histories of the First World War and the critique of white histories of conflict emerging from the work of black historians and communities.

Two of the reviews explore currents within participatory and critical research traditions. Niamh Moore explores these traditions through the lens of feminist philosophies and methodologies, while Tom Wakeford and Javier Sanchez Rodriguez explore the history of participatory action research (PAR) and its ties to social movements outside the academy.

Niamh Moore's review highlights the strategic contributions made to participatory research through the traditions of feminist and indigenous methodologies. Drawing on Donna Haraway's metaphor of the cat's cradle, Moore explores the way that these different traditions have learned from each other, fed into each other and been in (productive) tensions over the years. Importantly, she makes visible the common threads of these traditions, including a concern with questions of power, matters of voice, agency and empowerment and reflexivity. She identifies examples that include: popular epidemiology and women's health; the controversies and emerging insights arising from the publication of the book 'I Rigoberta Menchú' (a collaboration between Rigoberta Menchú, a Guatemalan activist and Peace Prize winner and anthropologist Elisabeth Burgos-Debray); and the online Mukurtu platform for sharing and curating community stories.

Wakeford and Sanchez Rodriguez's review is written from the position of individuals who situate themselves as both activists and academics. From a perspective both inside and outside the academy, they make visible the traditions of participatory action research that have evolved in social movements and their interaction with academic knowledge. They explain how PAR emerged as a practice that seeks to intervene and act on the world through disrupting assumptions about who has knowledge, and by building intercultural dialogue between those whose interests have historically been marginalised and those experts and institutions in dominant positions. They discuss the contributions of Paolo Freire and Orlando Fals Borda, as well as the emergence within universities of centres for Action Research and indigenist approaches to research before exploring recent examples of PAR from the Highlander Folk School in the US, to the Cumbrian Hill Farmers post Chernobyl, to questions of Food Sovereignty in India (amongst others).

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Central to many attempts to build collaborative research practices is a turn towards the arts and arts methodologies as a means of engaging with different forms of knowledge. Such a turn, however, can often overlook the distinctive and sustained tradition within contemporary arts of reflecting upon the question of how publics can come to participate in arts practices. Our series therefore includes two reflections on this question from different perspectives:

First, **Anne Douglas'** review offers a 'poetics of participation in contemporary arts', locating the turn to participation in contemporary arts within a wider history of 20th and 21st century arts and politics. She highlights the huge range of work by artists and arts co-operatives who are seeking to make work through participatory forms, and the deep scholarly tensions and debates that surround these practices. She explores through this rich history the debates over whether participation has become instrumentalised; whether the art/life divide should be preserved or eroded; the links between participatory aesthetics and cybernetic ethics; and the capacity for participation to challenge alienation and neoliberalism. Recognising arts practice as itself a form of research and inquiry into the world, she concludes with a set of powerful reflections on the role of the freedom to improvise and the importance of participation as a moment of care for and empathy with the other.

Second, **Steve Pool**, community artist and academic, reflects on the related but different traditions of community arts as they might relate to social science research. He considers what researchers in the social sciences might need to know and understand about artistic traditions if they desire to mobilise arts practice within the social sciences. He discusses the increasing democratisation of tools for making, the potential for them to open up artistic practice to publics as well as the importance of recognising that such practices are part of wider traditions and philosophies about the value and purpose of art. In particular, he discusses the tension between the idea of artistic autonomy – art for art's sake – and artistic democracy – the democratic creativity of all individuals. He foregrounds the way in which the community arts movement was also allied to a wider politics that moved towards cultural democracy and explores the contemporary practice of artists working in and with social science through examples such as Nicola Atkinson's 'Odd Numbers' and the Community Arts Zone's 'Being Cindy Sherman'.

More recent traditions of collaborative research characterise our final three reviews which take on, respectively, the way that design theory and practice are playing an important role in reshaping society, products and services; the emergence of new technologies to facilitate new forms of collaboration; and the increasingly urgent injunction to develop research approaches that enable collaboration with the 'more-than-human' others with whom we share the planet.

Theodore Zamenopoulos and **Katerina Alexiou** discuss the field of co-design and its underpinning theories and methods. They argue that Design as a process is always concerned with addressing a challenge or opportunity to create a better future reality, and explore how co-design has evolved as a process of ensuring that those with the life experiences, expertise and knowledge are actively involved in these making new tools, products and services. They observe how the participatory turn in this field has been concerned with both changing the objects of design – whether this is services or objects – *and* with the changing processes of designing itself. They highlight four major traditions and their distinctive approaches, before exploring the politics and practices of co-design through case studies of work.

Chiara Bonnachi explores how the internet is enabling new forms of collaborative knowledge production at a massive scale. She locates this discussion in the traditions of citizen science and public humanities, and examines how these have been reshaped through the development of hacker communities, open innovation and crowd-sourcing. In this process, she discusses the new exclusions and opportunities that are emerging through the development of projects that mobilise mass contribution. She examines the cases of MicroPasts and TrowelBlazers that demonstrate how these methods are being used in the humanities. In particular, she explores the ethical questions that emerge in these online collaborative spaces and the need for a values-based approach to their design.

Tehseen Noorani and **Julian Brigstocke** conclude the series with an exploration of the practice and philosophy of 'more-than-human research' which seeks to build collaborative research with non-human/more-than-human others. They discuss its philosophical foundations in pragmatism, ecofeminism and indigenous knowledge traditions and identify some of the theoretical and practical challenges that are raised when researchers from humanist traditions begin to explore how to 'give voice' to non-human others. In the review, they consider how researchers might expand their 'repertoires of listening' and address the ethical challenges of such research. To ground their analysis, they discuss the work of the Listening to Voices Project as well as accounts of researcher-animal partnerships and projects that draw on Mayan cosmology as a means of working with sustainable forestry in Guatemala.

This collection of reviews is far from exhaustive. There are other histories of collaborative research that are under-written here – there is much more to be said (as we discuss elsewhere) on the relationship between race and the academic production of knowledge. Each of these accounts is also personal, navigating a distinctive voiced route through the particular history they are narrating.

Despite this, at a time when politics is polarising into a binary choice between 'expert knowledge' and 'populism', these reviews show, collectively, that another way is possible. They demonstrate that sustained collaborative research partnerships between publics, community researchers, civil society, universities and artists are not only possible, but that they can and do produce knowledge, experiences and insights that are both intellectually robust and socially powerful.

Professor Keri Facer

Dr Katherine Dunleavy

Joint Editors: Connected Communities Foundation Series

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Julian Brigstocke

Julian Brigstocke is a cultural geographer at Cardiff University, working on power, aesthetics, posthumanism, and spaces of authority. He is author of *The Life of the City* (Ashgate) and co-editor of *Listening with Non-Human Others* (ARN Press) and *Space, Power and the Commons* (Routledge), as well as a special edition of GeoHumanities on *Spaces of Attunement*. Current research projects include work on culture, creativity and social change in a favela in Rio de Janeiro, and a Newton funded creative residency exploring the geo-aesthetics of sand, focusing on controversial land reclamation projects in Hong Kong. He was Principal Investigator on an AHRC funded project *Participation's 'Others': A Cartography of Creative Listening Practices*. He is bringing together these different strands of work together in a monograph, provisionally titled *The Aesthetics of Authority*.

1. INTRODUCTION

At a time of global warming, ecological destruction and mass species extinction, when the texture of everyday life is becoming increasingly mediated by technology, researchers are asking how humans might enter into less violent, destructive and alienating relationships with non-humans such as animals, plants, the earth, spirits, technologies and objects. The humanist ideal of an autonomous, rational, bounded human self is increasingly regarded as a fantasy. According to 'more-than-human' and 'post-humanist' research paradigms, human life is constituted through a riot of non-human forces, from the microbes in our guts, to the animals, plants and fungi that we live symbiotically with, to the objects that we care for and covet, to the gods and spirits that we summon and which bind us to others. These research paradigms have offered an alternative, *ecological* picture of social worlds, one in which humans are always constituted through diverse webs of non-human life. Gargantuan inequalities in economic wealth between the richest and poorest people, and a surge in decolonizing movements, trouble assumptions that there is something common across all human experience. The form and content of everyday experience is becoming subject to myriad digital and pharmacologic psycho-technologies that are enabling movement between multiple registers of awareness. Beyond the fiction of the autonomous, integrated self, a host of new epistemological, methodological, ethical and ontological frameworks emerge.¹

At their core is a determination to avoid engaging non-humans as mere resources for human society. For many researchers, research *on* non-humans can often fall into the same trap. Mainstream scientific and social-scientific research has tended to view non-humans such as animals as the passive objects of the research practice. Recently, however, efforts have emerged that strive to research *with* rather than *on* non-humans, and to attempt to embed research with non-humans into the same kind of relations of care, collaboration and mutual respect that characterises human research at its best and most ethical. In this review, we will introduce some of the varied ways in which researchers are attempting to work with non-humans through methodologies that invite non-humans to participate actively in the research process, or that find ways of identifying and amplifying the role of non-human *agency* in the construction of research practices. These approaches have been developed most strongly by researchers engaged in issues concerning the environment, ecology, animals, colonialism and decolonisation, science and technology. However, it is a research paradigm that is in principle applicable to almost anything. This is because it insists that human social worlds are always '*more-than-human*' social worlds, in the sense that they are composed of relations between humans, non-human life,

1

Epistemology concerns the nature of knowledge, while methodology concerns how we come to know, ethics concerns how we engage relationally and ontology concerns the nature of what exists.

and lively materials. Everyday social relations are always more-than-human social relations, animated by the agency of non-human forces.²

This review is set against the foil of a ‘Western conception of the person as a bounded, unique, more or less integrated motivational and cognitive universe, a dynamic centre of awareness, emotion, judgement, and action organised into a distinctive whole and set contrastively both against other such wholes and against its social and natural background’.³ As such, the review raises challenging and provocative questions for research that presupposes such a unit of analysis. Do standard participatory research methods such as interviews, focus groups and consultations often ignore how non-humans participate in the making of knowledge and power? Are there ways in which innovative research practices might enable more-than-human actors to participate more fully? How do experiments in non-human collaborative research problematise the assumptions, frameworks and ethical guidelines of participatory research paradigms, perhaps even changing the meaning of ‘participation’? What debts do more-than-human research methodologies owe to the wealth of knowledge found amongst indigenous, enslaved and colonised peoples who have often been regarded as ‘non-human’, treated as ‘objects’ rather than ‘subjects’ of research, and had their ontologies of more-than-human entanglements and agencies ridiculed and exiled?

There is something inherently difficult about the negatively-defined category of the ‘non-human’. Whilst it is easy to think of human/non-human in terms of a clear distinction between ‘society’ and ‘nature’, this distinction has been widely criticised by many writers who argue that nature is always social.⁴ For example, there is no such thing as nature that has not been affected by or co-constructed with human social forces – especially in an era (known as the *‘anthropocene’*) in which human action has permanently transformed the surface of the Earth, including its atmosphere and its waters. Rather than talking of the ‘non-human’, therefore, throughout this review we will follow the lead of the geographer Sarah Whatmore’s book *Hybrid Geographies*, and refer to ‘more-than-human’ research, where the notion of the ‘more-than-human’ is intended to convey a sense of the hybridity of social worlds. Social relations are made up of much *more* than human relations, and the concept of ‘more-than-human’ societies captures this diversity of forces, bonds, attractions, and interactions between humans and non-humans. So, in the rest of this review, we will refer to the ‘more-than-human’ to minimise privileging the ‘human’ in contrast with its absent ‘other’. All of the approaches we will describe here aim to unpick clear distinctions between nature and culture and between human and non-human, by emphasising the web of relations that mutually compose and bind them and avoiding placing the human at a level that sits above that of the non-human.

- **Section 2** turns to the historical context of more-than-human participatory research.
- **Section 3** outlines three broad conceptual orientations informing current research trajectories.
- **Section 4** describes a variety of projects conducting research in this field.
- **Section 5** offers a brief summary and discussion of this review.

²

Bennett 2010; Whatmore 2002.

³

Geertz 1983: 59.

⁴

See Castree 2005.

2.

HISTORICAL ROOTS OF MORE-THAN-HUMAN RESEARCH

Although the field of non-human participatory research is relatively recent, it draws on diverse traditions that are united in their commitment to challenging Enlightenment ideas of the human, as well as to critiquing humans' mastery and exploitation of nature. Although there are many different kinds of history we could tell in order to convey something of the intellectual and ethical debts of more-than-human research, here we will focus on the legacies of *biopolitical*, *pragmatist*, *ecofeminist* and *decolonial* thought. We write self-consciously from our positions as professional academics within the Western university sector – a sector that works within a context of patriarchal, white and middle-class dominance. We have selected the order below to trace the history of the Western academy's *engagement* with various forms of more-than-human theorising, rather than a history of when these various forms of theorising emerged.

2.1 Biopolitics and the emergence of ecological understandings of the social

Michel Foucault has traced the emergence in Western thought from the 18th century of a growing awareness of, and interest in governing, the life processes of entire human populations (and connecting these to the life processes of individual bodies). Foucault refers to this as the 'biopolitical' constitution of modernity.⁵ In fields as varied as statistics, biology, medicine, engineering and economics, there was a growing awareness of the importance of environment and 'milieu' in determining the possibilities of human society. Increasingly, power became focused on improving society's health, vitality and strength. Visions of a society as an organism became widespread. This contributed to powerful forms of racism that judged some races to be healthy, energetic and advancing the species, while other races were considered degenerate, sickly and a threat to the health of the species as a whole.⁶

This environmental sensibility travelled across fields and disciplines. In economics, there was a growing awareness that economic life could be subtly manipulated by tweaking environmental variables such as interest rates. Modifying the economic 'climate' through subtle adjustments of multiple variables (interest rates, tax thresholds, import duties, etc.) became an important way of controlling human populations without having to limit individual freedoms. Across many spheres of government, a growing awareness emerged of how environments affect human behaviour and determine the healthy vitality (or weak degeneration) of society. These 'biopolitical' rationalities of governing generated new forms of racism, power and control – particularly through the control of sexuality – but also lay behind resistance and welfare

⁵
Foucault 2007.

⁶
McKinlay 2009.

An experience of interpenetrated self and world is necessarily a more-than-human experience.

projects such as slum clearances, social welfare programmes and environmental politics. They legitimised many forms of technocratic authority, valorising the unquestioned expertise of scientists, doctors, economists, engineers, urban planners and so on.

Foucault's account of different ways of thinking about the relation between environments and society, and the importance of rationalities and experiences of life, growth and vitality in modernity, set an agenda for an important, ongoing scholarly effort to re-imagine the concept of life and the different forms of liveliness that animate human societies. His central challenge, which continues to animate more-than-human research, is for us to recognise that what counts as life or non-life, and what value we give to different kinds of life, should be considered a fundamental political question of modern times.⁷

2.2 Pragmatism: knowledge, environment and democracy

In the early 20th century, this interest in humans as embodied, environmentally sensitive beings amongst European intellectuals led to some radical ways of rethinking the nature of the human. The philosopher Friedrich Nietzsche argued for a fundamental overturning of the category of the human, requiring a new morality based on life, vitality and creativity, rather than a life-denying Christian morality of good, evil and endlessly deferred pleasure.⁸ Meanwhile, the philosophy of the American pragmatist John Dewey developed an environmental, 'naturalistic' theory of knowledge, experience and politics, starting from an account of the development of knowledge as an adaptive human response to external conditions that is aimed at an active restructuring of those conditions. Experience itself arises from an interaction between organism and environment: 'experience', he wrote, 'is heightened vitality... it signifies active and alert commerce with the world; at its height it signifies complete interpenetration of self and the world of objects and events.'⁹ This concept of experience also enabled a theorisation of the arts as vital in contributing to an awareness of the tensions between humans and their environment, as well as the resolution of those tensions. For Dewey, art has the capacity to bring to consciousness 'an experience that is unified and total'.¹⁰ Moving beyond Dewey's own thinking, we might add that such an experience of interpenetrated self and world is necessarily a *more-than-human* experience.

Dewey's thought has had a profound influence on contemporary understandings of participatory research and democracy. Dewey insisted upon the importance of discussion, consultation, persuasion and debate in the enactment of democratic life. He argued that democracy as a public discussion is the best way of dealing with conflicts of interest, because it is an experimental mode of enquiry through which we can develop a new conception of what our interests are. Central to this view of democratic life was an influential conception of 'publics'. Against the conventional, abstract notions of democracy as being carried out in an ideal public sphere, Dewey insisted that publics emerge through distinct socio-material entanglements. He argued that in technologically complex societies, in which innovation and change is the norm, the nature of what exactly makes up, holds together and animates a public is precisely the issue that is at stake. Noortje Marres takes this one step further to argue that publics are more-than-human, socio-technical constructions.¹¹

⁷
Blencowe 2012.

⁸
Ansell Pearson 1997.

⁹
Dewey [1932] 2009: 19.

¹⁰
Ibid.: 15.

¹¹
Marres 2012.

Unlike much humanist participatory research, more-than-human research insists on the link between Dewey's conception of publics, and his ecological way of thinking that always situated knowledge and experience in the context of the interaction between bodies and their environment.¹² Dewey himself remained within a fairly conventional assumption about the differences between human and non-human collectives. A public, Dewey argued, is grounded in the capacity of humans to observe and reflect upon the unintended consequences of collective actions. For Dewey, only humans are capable of transforming an incoherent collective into a self-conscious, reflective public. So whilst Dewey's thought has had a powerful role in traditions of more-than-human participatory research – particularly in his ecological theory of knowledge and experience, and his recognition of the role of more-than-humans in the composition of publics – his thought does not go far enough in recognising the vital role of more-than-human actors in the constitution of democratic publics.¹³

2.3 Ecofeminism

One of the most powerful traditions of Western thought is the one that associates men with culture and reason, and women with nature, embodiment and emotion. This identification of women and nature has been the cornerstone of Western patriarchy, justifying the idea that men's place is in the public sphere of reasoned debate, and women's place is in the private sphere of reproduction and domesticity.¹⁴ It is unsurprising, therefore, that traditions of feminist thought have offered the most important and innovative insights about the relationship between humans and non-humans, and it is feminist geographers, anthropologists, and philosophers who in recent years have produced some of the most compelling insights into more-than-human research.¹⁵

During the 1980s, with foundational texts such as Merchant's *The Death of Nature*, a body of 'ecofeminist' thought explicitly brought together feminist and ecological politics and emphasized the radical interconnectivity of humans, animals, spirits and the earth.¹⁶ As a political movement, ecofeminism always stressed that its spiritual and cultural dimensions were inseparable from its political actions. It became associated with pagan religious traditions, aiming to develop ways of thinking and experiencing that were based on embodied, intuitive relations with the earth. Ecofeminism made a series of important arguments about the interconnections of all systems of unjustified domination. Domination of women, it was argued, was closely connected to the domination of the poor, people of colour, children and nature. The ecofeminist philosopher Karen Warren refers to these unjustifiably dominated groups as 'Others', whether 'human Others' (women, ethnic minorities, etc.) or 'earth Others' such as animals, forests and land.¹⁷ Warren's reference to "Others" is meant to highlight the status of subordinate groups in a broad system of domination, subordination and 'othering'. For example, Warren argues that so-called 'natural disasters', such as droughts or floods, disproportionately affect women, the poor, children and people of colour – and thus reveal themselves as being not 'natural' at all, but bound up in multiple social, political and economic systems of domination and exclusion.

¹² For example, Blue 2015.

¹³ See Blue and Rock 2014.

¹⁴ Intersectional critiques of race and class have since problematised this narrative as excluding the experiences of women outside of the white middle class.
For example, Lorde 2013.

¹⁵ For example, Colebrook 2014; Dixon 2016; Haraway 2008; Plumwood 1993; Probyn 2016; Stengers 2015; Whatmore 2002.

¹⁶ Merchant 1990. For an excellent early discussion of ecofeminism, see Plumwood 1993.

¹⁷ Warren 2000.

This ecofeminist ethos of developing an ecological sensibility that connects multiple forms of domination has been central to participatory more-than-human research. However, ecofeminism (or at least, some versions of it) have been subjected to important critiques that have helped shape the current landscape of more-than-human research. For example, many researchers worried about ecofeminists' acceptance of the idea of an intrinsic connection between women and nature.¹⁸ Relatedly, one might be cautious of ecofeminism's faith in ideas of living 'organically' or 'in harmony' with nature, in light of Foucault's critique of the 'biopolitical' constitution of modernity discussed earlier. Some researchers are also wary of ecofeminism's apparent suspicion of technology, which is viewed as serving the degraded, 'instrumental' rationality of patriarchal, capitalist domination. For example, as we will explore in the next section, the work of writers such as Donna Haraway and Isabelle Stengers has offered new ways of thinking about the relationship between feminism, nature, science and technology, and spirituality. These new approaches draw on and extend many of the most important insights of ecofeminism, whilst fully embracing the 'artificial', hybrid and technological aspects of more-than-human worlds. The most famous statement of this departure from ecofeminism is Haraway's remark in her *Manifesto for Cyborgs*, 'I'd rather be a Cyborg than a Goddess'.¹⁹

2.4 Decolonizing and indigenous research

It is important to fully recognise that whilst more-than-human research methodologies currently appear new in the canon of Western academic scholarship, there are long, rich histories and traditions of knowledge about the more-than-human that come from outside the Enlightenment tradition, just as decolonizing work has existed for 500 years within and alongside colonization itself.²⁰ Indeed, academic more-than-human research needs to be situated within a history of colonial practices that systematically sought to discredit and dis-member non-Western ways of knowing, and to dehumanize dominated peoples, framed as part of nature so that they could be exploited with extraordinary brutality.²¹ Colonialism is an ongoing system of violence that categorises dominated populations as passive, mute, objects of knowledge. Like patriarchy, it has historically been justified through use of simplistic dualisms between civilised and primitive, culture and nature, reason and emotion and master and slave. Recognising the violence of this, postcolonial and decolonial scholars have highlighted, in addition to material and symbolic violence, the 'epistemic violence' and 'ontological violence' of colonialism: epistemic violence in imposing Western concepts, languages and rationalities while assuming non-Western peoples cannot think; ontological violence in severing the human from the world, and non-Western peoples from humanity.²² Decolonizing and indigenous research has insisted on the need to draw on 'subaltern', marginalized ways of thinking and reasoning, whose origins are not the universities of imperial powers, but the likes of black and indigenous thought and grassroots activist movements, such as the campesino movement in South America,²³ the Zapatistas in Mexico,²⁴ and the decolonizing student movement Rhodes Must Fall in South Africa.²⁵

18

On the history of ecofeminism, focusing on the issue of essentialism in particular, see Gaard 2011.

19

Haraway 1987.

20

Sandoval 2000.

21

Trinh 1989.

22

Fanon 2008; Mignolo 2009; Spivak 1988; Wynter 2003; see also Moore on feminism in this series.

23

Holt-Gimenez 2006; Borras Jr 2010.

24

See <http://enlacezapatista.ezln.org.mx/>; see also Holloway 1998.

25

See <https://www.theguardian.com/news/2015/nov/18/why-south-african-students-have-turned-on-their-parents-generation>; see also <http://theconversation.com/what-a-new-university-in-africa-is-doing-to-decolonise-social-sciences-77181>

These histories of thought show that academic researchers can learn a lot from indigenous knowledges. Historically, it is well established that much anthropological research concerning indigenous peoples participated in, and justified, colonial violence.²⁶ It has also been criticised for being ‘extractive’: appropriating the knowledges and experiences of indigenous peoples to further academic careers, rather than to be of any benefit to the research participants themselves.²⁷ However, some research has also engaged with indigenous knowledges in more collaborative and respectful ways that often draw on shared activist and participatory research projects. Such work recognises the imperative to avoid either appropriating or ‘stealing’ these knowledges, on the one hand, or denying the usefulness of indigenous knowledges for contemporary global ecological problems, on the other. Similarly, it is important not to assume that indigenous peoples have a pure, authentic, unmediated or uncompromised relationship with the natural world. An important series of anthropological works such as Marisol de la Cadena’s *Earth Beings*, Elizabeth Povinelli’s *The Cunning of Recognition* and Viveiros de Castro’s *Cannibal Metaphysics* show how indigenous practices interact in complex and often violent ways with Western rationalities and systems of power.²⁸ Such research helps illuminate, and seek ways of moving beyond, the structures of reason in Western traditions of thought.

For example, Deborah Bird Rose, working with the Yarralin people in the Northern Territories of Australia, has shown how Indigenous views of human identity create the foundations for an ethos of ecological respect, restraint and recognition, which has much to teach dominant cultures.²⁹ Rose shows how, in contrast to the future-oriented rationalities of the West, which frame the past as having already finished, Yarralin society orients itself towards origins. The past – the ‘Dreaming’ – is not finished, but continues in all living bodies whose origins are in the Dreaming, through ceremony, creation and music. Memory, place, dead bodies and genealogies hold stories that are painful but also constitute relationships of moral responsibility. This way of experiencing time makes possible a way of relating to death that is less alienating and more sustainable than Western rationalities that desire to ‘overcome’ death or hold it at bay for as long as possible. Death is part of life, a return to the land that nurtures life. This vision of death, Rose argues, enables a way of thinking about the land as a ‘nourishing terrain’, and of death as a nurturing, material continuity with ecological others.

Academic researchers in the field of more-than-human research have much to learn from decolonizing traditions of research on the one hand, and indigenous worldviews on the other. Contrary to extracting methodologies, concepts, or theories, this entails joining forces with decolonizing and indigenous ethics of care and responsibility, sharing intellectual and political commitments and developing modes of ‘border thinking’ that escape the dominant forms of rationality of Western reason.³⁰

Learning from decolonizing traditions of research on the one hand, and indigenous worldviews on the other entails joining forces with decolonizing and indigenous ethics of care and responsibility.

²⁶ Tuhiwai Smith 2012.

²⁷ Todd 2016; see also Participatory Action Research review in this series.

²⁸ de la Cadena 2015; Povinelli 2002; Viveiros de Castro 2014.

²⁹ Bird Rose 2000.

³⁰ Mignolo 2012. For a recent example, see Liebert 2018. On ways of thinking about care in more-than-human worlds, see Puig de la Bellacasa 2017.

3.

CONCEPTUAL ORIENTATIONS IN ACADEMIC MORE-THAN-HUMAN RESEARCH

Although research engaging with more-than-human worlds is very diverse, we identify three broad conceptual approaches that have emerged in the Western academy, which place emphases, respectively, on: (1) socio-technical relations; (2) experience beyond the human; (3) more-than-human communication. Because they are attempting to overturn the whole tradition of Western thought that makes European man the measure of all things, these approaches can seem counterintuitive. Each has a rich and often complex conceptual architecture. In what follows, we will briefly analyse key points from each approach.

3.1 Socio-technical relations

In recent decades, otherwise divergent theoretical paradigms including Structuralism, Post-Structuralism and *Actor Network Theory* have outlined radically relational views of the world. According to this viewpoint, everything (whether human or non-human) is created through, and made meaningful by, its relations with other things.³¹ There are many ways of interpreting this idea. However, it is potentially radical because it enables us to reject at least two central assumptions of Enlightenment thought. First, it rejects the idea that relations between humans are in any way more 'real' or meaningful than relations between humans and non-humans (and between non-humans and other non-humans). Second, it rejects the idea that the human 'self' is autonomous, bounded and self-contained. In fact, the self is merely a complex bundle of relations, not intrinsically different to any other bundle of relations. The 'human' therefore no longer exists on a different plane of social reality to the non-human. Rather, this relational view of the world articulates an entirely 'flat' view of what makes up the world – sometimes referred to as a 'flat ontology'.³²

Perhaps the most well-known relational theory comes from Actor Network Theory (ANT), associated with writers including Bruno Latour, Michel Callon and John Law.³³ Actor Network Theory views the social as being constructed through creative associations between varied human and more-than-human agents. More of a 'sensibility' or way of seeing the world than a theory, ANT brings certain characteristics of the world into view. First, it highlights the constitutive role of non-humans in social life. Second, it avoids seeing agency as an essential capacity that some kinds of entity (like humans) possess and others (like stones or clouds) don't, but identifies agency as being an outcome of the relations between all kinds of different social and material entities. It is these 'actor networks', not subjects or objects in isolation, that get things done.

31

This idea is common to very different theorists, from Ferdinand Saussure to Pierre Bourdieu to Gilles Deleuze to Bruno Latour.

32

See the influential article, Marston, Jones and Woodward 2005.

33

For a summary of ANT by one of its leading proponents, see Latour 2005b.

One crucial point that researchers of more-than-human worlds could take from ANT is that ‘agency’ – the capacity to act and to be responsible for those actions – is not something that only belongs to humans. Agency isn’t concentrated in a single human body, but is a relational, distributed, more-than-human achievement.³⁴ This leaves open, however, a series of questions, the most important of which relate to power and responsibility. How can this ‘flat’ conception of social worlds account for the unevenness of power relations? What scope is there for making normative distinctions between ‘better’ and ‘worse’ networks? What happens to our notions of responsibility and accountability when agency is distributed so widely? These are questions that researchers working within this tradition are still working through today.

In their influential book *Acting in an Uncertain World: An Essay on Technical Democracy*, Callon, Lascoumes and Barthe develop an approach to participation that – drawing on ANT’s conceptualisation of the social as a dynamic, fragile and heterogeneous assemblage of various human and non-human agencies – takes ‘controversy’ as its primary mode of explanation.³⁵ Controversies, they write, create *overflows* that are at once technical and social. Controversies help to reveal hidden events and processes by bringing forward groups that are involved with the overflows. Socio-technical controversies are important spaces of learning, making it possible to overcome the gap separating laypersons and specialists, and also between ordinary citizens and their representatives. They conceptualise this potential of controversy through the notion of a ‘hybrid forum’ which brings together multiple actors into a mutual space of exploration, learning and construction, and which scrambles distinctions between experts and laypersons, and the power asymmetries that these distinctions entail. In a similar vein to the concept of ‘controversy’ generating a hybrid forum, we could evoke Callon’s ‘hot situations’, Latour’s ‘matters of concern’ or Stengers’ ‘things that force thought’, to name the moments of disturbance in which the unexamined, material fabric of everyday life starts to deform and reform itself.³⁶ Such situations, matters or forces make expert knowledge claims the subject of intense political interrogation.³⁷

Another way of thinking about the relational nature of the more-than-human world comes from the feminist philosopher Donna Haraway. In her *Cyborg Manifesto*, which develops a socialist-feminist account of women under advanced capitalism, Haraway theorises a notion of the ‘cyborg’ as a figure that rejects any rigid boundaries separating humans from animals and machines. We are all cyborgs, in the sense that we are all made up of a multitude of human and non-human forces. The clothes we wear, the technologies we use, the emotional relations that attach us to others, the bacteria in our gut – all these are not at all external to our identity but form an essential part of it. All humans are hybrid, monstrous, cyborg, more-than-human beings that share kinship with many non-human beings. Crucially, the cyborg does not aspire to unify all its parts into an organic whole. Rather, the cyborg ‘is not afraid of joint kinship with animals and machines... of permanently partial identities and contradictory standpoints’.³⁸ The cyborg forms close bonds of love, care and respect across the boundaries separating ‘self’ from ‘other’.³⁹

³⁴
Sayed 2014.

³⁵
Callon, Lascoumes and Barthe 2009.

³⁶
Callon 1998; Latour 2005; Stengers 2005.

³⁷
Whatmore 2013.

³⁸
Haraway 1987.

³⁹
Sandoval 2000.

How might these ideas help us think about participatory more-than-human research? Haraway's book *When Species Meet*, which addresses the interactions and mutual dependency between humans and other species, offers some useful pointers here.⁴⁰ In a moving account of human-dog training in agility sport, Haraway shows how the intense training required for the sport creates a 'contact zone' in which human and dog are forced to confront important philosophical questions. 'Who are you, and so who are we? Here we are, and so what are we to become?' Although some people might think of training as a process where the human acts to make the dog fully obedient and do whatever he/she commands, Haraway shows how training involves plural relations of mutual trust, respect and authority between dog and human. The human trainer has to learn to *trust* the dog and to recognise and respond to the authority of the dog's performance. There is much that more-than-human researchers can learn from this insight. When researching with non-human 'others', human researchers have an ethical responsibility to avoid treating non-human research participants as passive objects. Instead, human researchers can look for ways of recognising and responding to the authority of the non-human participants, and of entering into shared, playful spaces of interspecies co-becoming and care.

3.2 Experience beyond the human

Another tradition of thought seeks to expand the place of experience outwards, looking to understand experience from a more-than-human perspective. When we fully recognise that social worlds are always more-than-human, the seemingly self-evident concept of 'experience' – a foundational starting point for most research methodologies – becomes much more complicated. This is because when we think of experience, we almost automatically tie it to our own senses of self. When I consider animal sentience – whether a mouse has feelings and consciousness, for example – it is very hard not to turn this into a question of whether animals feel and think *like I do*. But why shouldn't the mouse have feelings and awareness in ways that are not like mine? Part of the problem here is that we feel as if we 'own' our experiences, and as if these experiences are somehow private and inaccessible to others. Once we recognise that humans come into existence through their relationships with human and non-human others, we can come to an expanded way of thinking about experience that does not tie it exclusively to the interior of a bounded human subject. We may consider that experiences are not 'owned' exclusively by a stable, self-contained subject. We might even have to think of experience without a subject altogether.

40

Haraway 2008.

These ideas of non-human or non-subjective experience can seem very counter-intuitive. However, writing in this area of thought, such as from the orientations of 'non-representational theories' or '**post-phenomenology**', insists that producing a genuinely more-than-human knowledge of the world requires us to face these propositions head-on.⁴¹ Rather than attempting to describe experience directly (which was the goal of the philosophical tradition known as phenomenology), post-phenomenology concentrates on how experience is mediated by more-than-human relations. One strand of this work, associated with Don Ihde, has focused on technoscience.⁴² Other strands, perhaps more useful for thinking about participatory more-than-human research, have emerged from areas such as cultural geography, drawing on contemporary European philosophy. These focus on the ways in which subjects come into existence through experience, rather than existing prior to experience. Self and world emerge together through their co-constitutive being together. This leads to an impulse to understand the autonomous existence of non-human objects, outside of the ways in which they appear to, or are utilised by, people. It requires attempting to get at the 'otherness' of non-human experience and consciousness, rather than assimilating these to human frames of reference. This is sometimes described as a methodology of 'attunement': a methodology where the researcher looks for ways of sensitising their bodily responses to non-human registers of experience and inhabiting the contact zones of multi-species experiences.⁴³ The philosophers Deleuze and Guattari referred to this through the notion of 'becoming animal'.⁴⁴

Methodologically, this tradition of thought demands creative and speculative practice, since its goal is a contradictory one – understanding non-human experience, and accounting for it through human practices (for example, writing), without assimilating it to human modes of thought. For this reason, it demands creative and speculative research practices that thrive on apparent contradictions, rather than denouncing them as meaningless or futile. Recent philosophical schools such as 'speculative realism', 'object-oriented ontology' and 'new materialism' have taken these speculative thoughts in exciting directions. As illustrated through case studies in the next section, when explored through creative, politically engaged research methodologies, the resulting journeys of thought and experience can be revealing.

3.3 More-than-human communication

Another key conceptual approach is found in 'multi-species studies'. Such work aims to produce rich, detailed, 'thick' descriptions of the distinctive experiential worlds, modes of being and social and cultural attachments of other species. This often involves forms of ethnography with indigenous people who already recognise the world to be made up of more-than-human, multi-species communities. Anthropologists who have spent time with people who have kinship with non-humans (animals, plants, rivers, mountains, land, spirits, and more) have attempted to analyse the forms of sociability that are embedded within a more-than-human world. This work is heavily influenced by the anthropological perspectives of writers such as Eduardo Viveiros de Castro and Philippe Descola, whose work with Amerindian peoples from lowland South America takes seriously indigenous and other non-Western cosmologies which attribute selfhood not just to humans, but to diverse non-human others.

41

Anderson and Harrison 2016;
Ash and Simpson 2016.

42

Ihde 2009; Selinger 2006;
Rosenberger and Verbeek 2015.

43

Brigstocke and Noorani 2016.

44

Deleuze and Guattari 1987.

Viveiros de Castro, in an influential article on 'Amerindian perspectivism', has documented Amerindian ways of seeing the world which escape conventional nature/culture distinctions. In these cosmologies, animals and spirits are understood to view themselves and act in the world in the same way as humans do – from the perspective of a jaguar, the jaguar is a self with an experiential world and a cultural life involving hunting, kinship, home and a heterogeneous distribution of cares and concerns. Perspectivism may be rendered consistent with the scientific search for objective knowledge insofar as the phenomenal world of each self is delimited by objectively-ascertainable capacities of perception, affectation and so forth.⁴⁵ Nevertheless, it invites a radical shift in orientation to the more-than-human, offering a '**perspectival multinaturalism**' that inverts the standard (Eurocentric) formulation of 'multiculturalism': instead of one (material) nature and many cultures, non-humans such as animals and spirits are understood as differing costumes hiding culturally-similar interiors – selves with phenomenal worlds similar to ours.⁴⁶

One of the most important ways in which Western intellectual traditions have described humans as unique and fundamentally different from other forms of being is through the human capacity for language and communication. Therefore, undoing the idea that humans are totally set apart from non-humans requires theorising further how to cross the boundaries between human and non-human communication. Amidst a broader turn to the interdisciplinary study of biolinguistics and biosemiotics, Eduardo Kohn's book *How Forests Think* has revitalized **multi-species ethnography**.⁴⁷ As Kohn argues, within the cosmology of perspectival multinaturalism, trans-species communication is possible through boundary crossing – becoming the 'self' of another species. In Amerindian cultures, shamans provide the figure of the boundary crosser; psychedelic plants and dreaming enable crossings. Kohn's analytical entry point into human-non-human communication draws on the semiotics of the American pragmatist, Charles Peirce, which distinguishes between several forms of representation. Symbols are one form of sign, gaining meaning purely through human convention. However non-symbolic signs (for example: 'icons' such as the coloration of lizard's skin representing its background; and 'indices' such as tracks indicating the presence of animals) are also available to non-humans. If we follow Kohn and Peirce in recognising that language exceeds symbolic communication, we can document how non-human actors participate in abundant and lively language systems. Kohn thus proposes an 'anthropology of life', which embeds humans within webs of more-than-human lifeworlds replete with symbolic, iconic and indexical languages.

45
Despret 2004.

46
Viveiros de Castro 1998;
Viveiros de Castro 2004.

47
Kohn 2013.

 Undoing the idea that humans are totally set apart from non-humans requires theorising how to cross the boundaries between human and non-human communication.


4. RESEARCHING MORE-THAN-HUMAN WORLDS

In this section we present a number of examples of more-than-human participatory research. The case studies are delimited by our own experiences and gaze, which in turn are heavily shaped by the English-speaking academy. Nonetheless, they do showcase a variety of ways in which researchers have taken up and worked with the concepts and historical traditions described above.

4.1 The fruits of 'giving voice'

A key challenge to all attempts to enrol non-humans in participatory research is the idea that participation requires having a voice, and as non-humans are incapable of speaking they cannot therefore participate. From this perspective any attempt to 'give voice' to non-humans could be characterised as anthropocentric fictionalising – at best, producing an empathy that reveals something about ourselves, while at worst, legitimizing modes of domination over others whom we characterize on our own terms. We may always anthropomorphise when we give voice to non-human others.⁴⁸ Additionally, giving voice remains fraught even in a strictly human context, from legacies of disenfranchisement of slaves and women, to continuing to speak on behalf of the subaltern, including those protected by legislation as 'vulnerable peoples' such as those lacking in mental capacity, where the giving of voice risks reinscribing the voiceless in their position as voiceless.⁴⁹ Rather than seek resolution of this seemingly-intractable problem, one response for more-than-human researchers is to analyse what wider phenomena are revealed when we attempt to give voice.

Gwendolyn Blue offered such a commentary in describing Bear 71, an interactive documentary created by the National Film Board of Canada, which explores the surveillance of animals in the Canadian Rockies, where the eponymously named female grizzly bear moves through the enclosure and speaks to us in a first person imagined narrative form, evoking our identifications and our sympathies.⁵⁰ Blue did not look to Bear 71 to gain an 'accurate representation' of the subjective experience of a grizzly bear, but to develop post-phenomenological insights into how the experience of Bear 71 and other animals in the enclosure are brought into our awareness through a plethora of surveillance and representational technologies. The value of her research lies not in excavating the 'voice of the bear', but in highlighting the contradictory coexistence of two logics: the technological multiplication of media and mediation, and an increasing felt sense of immediacy, intimacy and connection. This enabled Blue to conclude that digital information systems 'augment the capacity for collective care and concern in public life while simultaneously facilitating the surveillance of and intervention into private lives'.⁵¹

⁴⁸
Bennett 2010.

⁴⁹
Alcoff 1991–1992.

⁵⁰
Blue 2016.

⁵¹
Ibid.: 42.



© Kat Austen

Figure 1
Austen's Coral Empathy Device.

In a second example of experimenting with giving voice, the artist-researcher Kat Austen sought to call forth empathy with, and embodied knowledge of, a marine environment that is being altered in anthropogenic ways.⁵² Austen used sound recorders to map an underwater environment in Bergen, Norway, also measuring the levels of microplastics detected in nearby algae. She transduced her recordings into analogue vibrations of sound, touch and smell, creating an embodied interface in the form of the 'Coral Empathy Device', a multi-sensory headset worn in order to re-present the processes through which the coral is affected by its environments. Austen's aim was to create a conversation between humans and coral, allowing us to perceive other worlds and very different spatio-temporal scales (*Figure 1*).

As an experiment in interspecies empathy, Austen avoids the thorny claim to know what the coral is actually experiencing.⁵³ Rather, by feeling sensations generated by the changing measures of what the coral itself was 'feeling' over time, Austen experimented with cultivating an empathy that grounds the possibility for revitalizing care in the coral, the marine environment and beyond. Moreover, Austen suggests such empathy can bypass mental representations altogether – inspiring responses to the crisis of climate change without the need for deliberative consensus. Finally, the ability of users to remove the device reminds them of humans' capacity for motility – a capacity unavailable to the coral. Thus, removing the coral empathy device is itself an important moment in engendering empathy, suggesting empathy is produced not by 'becoming' another but in the interplay of similarity *and* difference in our encounters with non-human others.

52
Austen 2017.

53
For example, see Nagel 1974.

4.2. Expanding repertoires of listening

Another response to the problems of 'giving voice' has been to shift the emphasis from giving voice to learning to listen differently. Learning to listen differently is not easy: it requires learning to recognize, and be interrupted by, non-human agencies, forces and forms, and note the role that they are already playing in the construction and disruption of publics. It is unsurprising that questions of listening and voice have fostered participatory practices that cut across the senses. In particular, sound art and music – as temporal forms of expression – have proved particularly effective at communicating non-human temporalities, including the times of geological transformation, climate change and the *anthropocene*.⁵⁴ A number of artists and researchers, for example, have experimented with using innovative recording practices in order to listen to the voices of the earth.⁵⁵

The sonic is connective, rendering commensurable different modalities of data, allowing us to place them side-by-side so that they can reverberate and echo, linking up spatially and temporally distant agencies and places. Sounds are immersive; engaging people deeply and emotionally. They also articulate and dramatize the experience of place and landscape, situating bodies within complex events such as the processes of climate change. These qualities make sound an effective medium for including non-human agencies in contemporary research practices. Researchers have sought ways of enabling human communities to participate in the sounds and voices of the environment. For example, George Revill leads an ongoing research project on *Listening to Climate Change*.⁵⁶ In part, the project is driven by the imperative to use participatory methodologies to move beyond the impasse of whether climate change exists or not. Instead, they foreground the question, 'What kind of world do we want to live in in twenty years time?' Imagination exercises such as this allow us to take hold of the future rather than be passive before it.

The project is set in Blakeney, a UK coastal community with a highly dynamic coastline that is an important reserve for marine mammals and migrating birds and is also susceptible to extreme weather events and climate change. The researchers, including social scientists and sound artists, enlisted stakeholders with particular expertise in the research site, together with wider communities of local residents, as human participants in the research. To these stakeholders, they introduced the term 'living landscapes' to convey that the landscape is always changing – (re)made by the people who live on the land, forces of nature and the lives of plants, non-human animals and birds. Participants were then asked two questions: (1) to identify two other 'voices' they would want heard, where one of these has to be a non-human voice; (2) to imagine that they had to think about the future and make a decision on what acoustic recordings to solicit in order to do so. From these conversations, groups decided on a number of different kinds of sounds to harvest, such as the sonic sampling of environmental processes, musical representations of long-term change, scientific data sonification, folk songs and 'vox pop' interviews reflecting on climate change. A number of further conversations were then facilitated to discuss the recordings, what 'voices' the participants would choose to delete if they could only save a limited number, and so on (*Figure 2*).

54

The epoch of the Earth's history that began with the industrial revolution and the consequent emergence of the human being as a geologic force. See Chakrabarty 2009.

55

For example, see Ken Goldberg 2006: 'Ballet Mori'.

56

Revill 2017.



© Chris Bonfoglio

Figure 2
*Geese over the marshes
between Blakeney and Cley.*

Inspired by critical post-phenomenological approaches, Revill approaches agency as that which shapes what can be thought and said. The project design makes space for a rich public debate concerning the place of non-humans in their lives, as well as attempting to listen to these non-human voices in new ways. At the same time, the project also raises challenges that are common to many projects involving non-humans. As with Austen's Coral Empathy Device, can the non-human voices 'speak back' to the research process, or do humans end up speaking on their behalf? Does the research design presuppose that it is only how non-humans matter *to humans* that is the important thing, or can genuine dialogue be created across these divergent registers? Anticipating this challenge, the researchers weave into exercises facilitated to imagine what will happen in the future, factual observations about what has happened in analogous situations elsewhere and at other times. Revill describes this as a 'sleight of hand' that serves to trouble the assumptions of the human participants as they emerge. Recognising the need to treat imaginative work seriously as a praxis, this lends imagination exercises a dialogic quality whereby what has happened can come to interrupt constructions of what will happen.⁵⁷

57
From personal communication.
See also Pearson 2006.

4.3 Building stages for new encounters

Another way to side-step naive attempts to give voice has been to identify and work with the capacities of non-human others to participate in meaningful ways by constructing 'stages' for non-human voices to speak, and developing modes of receptivity that allow us to be able to respond to them. An innovative collaboration has been documented between researchers at Oxford University, led by Sarah Whatmore, and residents of Pickering, a small town in the UK that suffered regular flooding, making flood risk management a subject of a great deal of controversy. The project design involved assembling new 'competency groups', where natural scientists and social scientists collaborated with volunteer residents in the localities where flood risk management plans were a powerful source of tension and disagreement. Each competency group was comprised of project team members and residents. During bi-monthly meetings, hands-on flood modelling – usually the province of appointed experts – became the key practice through which 'expert' and lay members' knowledge claims could be tried out. Ever-present within the discussions was the non-human agency of water itself: its paths, dynamics, (over)flows and capacity to push back against poorly-conceived models. Equally important, however, was the agency of artefacts such as photos, video footage, computer models, policy documents and maps.⁵⁸

Drawing on the work of Stengers, Whatmore and Landstrom contrasted a conventional participatory ethos of empowering local **people** with an ethos of empowering the **situation**, where the aim is to 'force thought' in those affected by it and to 'slow down' the reasoning of the established experts, in order to enable a redistribution of expertise. The competency groups used residents' situated knowledges of the flood catchment area, including memories of floods dating back to the 1940s, to modify existing Environment Agency flood models that had in the past been the cornerstone of the 'top-down' expert view of flood management in the area. These existing flood models insisted that a large and costly flood wall was needed. The modification of the official flood map was followed by flood modelling exercises in which everyone in the competency groups could try out modelling different solutions to the flooding, with the help of the flood modellers to programme the software. New solutions were explored, and exhibited in the local area, generating substantial debate and, eventually, the take-up of a new solution, which did not involve flood walls but a series of more inexpensive upstream 'bunds'. Through intentionally building stages and spaces for the intermingling of human and non-human agencies, and slowing practices down, Whatmore and Landstrom document how hybrid forums of knowledge and expertise can offer innovative practical and political responses (*Figure 3*).

⁵⁸
Whatmore 2013.



Figure 3
Upstream bund diverting flow into field.

Through intentionally building stages and spaces for the intermingling of human and non-human agencies, and slowing practices down, hybrid forums of knowledge and expertise can offer innovative practical and political responses.

4.4 Ethics in more-than-human participation

A large body of distinct yet related research, particularly in human geography, anthropology and philosophy, has explored ways of understanding the participation of non-human animals and plants in research in Western contexts.⁵⁹ Moreover, a number of researchers are engaging in creative experiments in inviting non-human animals into participatory research processes. Michelle Bastian et al's recent collection of essays marks a highly significant intervention in this field of research, exploring a range of methodological practices for including entities as varied as dogs, birds, plants and trees in research processes.⁶⁰

In one such example, Tim Hodgetts, a human researcher, and Hester, a springer spaniel, described their role in a research project that brought humans, Hester the dog and pine martens in rural Wales into a specific set of conservation practices.⁶¹ Small carnivorous animals, pine martens are very rare in this area, and ongoing conservation projects assess the size and location of any remaining populations, whilst also preparing for a 're-stocking'. Searching for these elusive animals often relies on scat surveys but these surveys are themselves difficult, since pine marten scat is so similar to the scat of certain other animals. The project aimed to combine canine smell with human sight to identify pine marten scat. Both dog and human had to learn the skill of collaboratively identifying the scat.

In contrast with thinking of the dog as a 'tool' to enable the research to be carried out, Hodgetts and Hester emphasised the vital role in their research of embodied empathy and attunement, as different feeling, seeing and thinking bodies undo and redo each other, reciprocally but not symmetrically. Given this rich attunement between human and dog, one might consider analysing the research practice as involving different kinds of collaboration between human and dog. This raises issues of representation, ethics and power that are of course central to participatory research. Did Hester consent to being a research participant? According to Hodgetts and Hester, Hester's tacit consent could be judged from the enthusiasm and joy with which she engaged in the activities. However, even accepting that the research *process* was enjoyable for her, it is harder see how the *outcomes* of the research (distribution maps of pine martens) benefit her. Indeed, Hester is documented as having shown little interest in contributing to the writing up of their research (*Figure 4*).

Contrast this with the zoömusicologist Hollis Taylor's experiments with co-producing music with birds, in particular, pied butcherbirds in Australia.⁶² The use of birdsong in music is well established, but Taylor strives to develop a genuine co-production of sonic outcomes. Taylor writes:

As a violinist/composer I do more than incorporate avian vocalizations into my practice: I trust the musicality of pied butcherbird song, and many of my (re)compositions are almost direct transcriptions. My ability to transcribe pied butcherbird vocalizations improved by playing them on the violin – with me entering into the physicality of the experience. This became for me part of the analytical process and not merely what preceded or followed it. I study pied butcherbird vocalists, but I also study under them.⁶³

⁵⁹

Interesting examples include:
Barua 2014; Callicott 2013;
Haraway 2008; Kirksey and
Helmreich 2010.

⁶⁰

Bastian, Jones, Moore and Roe 2016.

⁶¹

Hodgetts and Hester 2016.

⁶²

Taylor 2016.

⁶³

Ibid.: 48.

Recognising and enhancing the role of more-than-human participation in academic research will ultimately need a much fuller reworking of ethical language, norms and standards.

In terms of participation, Taylor gives examples of birds declining to participate. She was attacked by a 'bird-musician' twice during nesting season and, concluding that the bird was quitting the project, no longer recorded there. Similarly, on one occasion eight pied butcherbirds evicted her from their territory via harsh calls and beak claps. Taylor suggests that the birds both were fully involved in the co-production of key project outputs, namely the music, and also had a genuine choice to decline to participate. Taylor does not offer a view, however, of whether the birds were empowered in any way by this participation.

It is clear that recognising and enhancing the role of more-than-human participation in academic research will ultimately need a much fuller reworking of ethical language, norms and standards. Beyond ethical objections to outright exploitation of animals in experimentation, projects involving animal participation raise difficult philosophical questions about the nature of power and empowerment. Participatory research is a research practice that is dedicated to empowering stakeholders in the research. What empowerment might mean in relation to non-human animals, however, remains unclear and contested. The above examples could be construed as problematic attempts to bridge the difference between humans and non-humans, by re-articulating non-humans as being like humans, and granting them rights to informed consent and so on. Most discussions of ethics, empowerment and participation in research are almost entirely anthropocentric, and rather than trying to fit non-human participation within the ethical categories of human research (informed consent, empowerment, the difference between 'genuine and 'pseudo' participation, control, decision-making and so on), which can seem like trying to slot a square peg into a round hole, new frameworks are clearly needed. This will be a complex affair, requiring a wholesale reworking of many of the embedded institutional assumptions about the nature of social research. Until then, researchers engaging in more-than-human research will have few universal norms to refer to. Given intersectional critiques of universality, this might be recast as an opportunity to strive instead for ethical sensibilities that are sensitive to their specific research practices and conceptions of empowerment.

Figure 4
Michelle Bastian's research team from a dog's perspective.



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4.5 Documenting ecologies of more-than-human selves

The examples of Hester and the pied butcherbirds beg the question: to what extent, if at all, is it legitimate to ascribe like-minded selves to non-human others – as if beneath all that difference we would find selves ‘just like us’? In an example of more-than-human ethnography that takes forward a synthesis of more-than-human research with a recognition that non-humans do not share the same capacities for ethical deliberation as humans, Naomi Millner conducts a project on community forestry in the Maya Biosphere Reserve in Guatemala. In order to try to research the ‘pre-history’ of sustainable forestry – or ‘sustainability before Sustainability’ – Millner approaches the implementation of sustainability practices as imperfect attempts to translate the pre-existing signification of non-human selves into the symbolic language of resource management protocols and practices.⁶⁴ Millner thus avoids the trap of believing that the reserve was a *terra nullius* awaiting human intervention, a term used in the justification of settler colonialism. Following Eduardo Kohn, Millner articulates the challenge of documenting the historical layering of human and non-human interaction as ‘interlacings of networks all trying to know each other’.⁶⁵

Millner draws upon oral history to develop a more-than-human oral history methodology. Where oral history is traditionally an account of an individual person’s life, more-than-human oral history starts from the recognition that ‘a life’ is never just an individual human life but is also a crossing point for many other entangled lifeforms. In order to do this, Millner has conducted workshops and recorded the oral histories at particular sites, so that her (human) participants could show her important aspects of their life that extend beyond the individual. For example, one participant showed her how he makes craft objects out of mahogany. Another showed her how the community used to extract a form of natural chewing gum called chicle from trees in the forest, until petrochemical gum destroyed the industry (Figure 5). In a third, a guide showed Millner around the ruins of Mayan architecture, explaining the importance of Maya architecture to the community.

In each case, the individual’s life provided the framing, but interruptions from the site itself (the sounds of the forest; a sudden downpour; the silence of a two-thousand-year-old stone structure) were used as prompts to broaden from the personal story to the imbricated living networks that the interviewee participated in and was shaped by. Through these research practices, the project aims to adapt an existing methodological tool in order to allow it to register more fully the multiple networks of non-human life that are entangled within the lives of participants. In this way, Millner suggests that a fuller description of the more-than-human ecologies of community forestry can be developed.

64
Personal communication.

65
Ibid.



© Naomi Mithner

Figure 5

Jorge Soza demonstrates the extraction of chicle, a sustainable technique practiced in the Petén (Guatemala) between the 1920s and 1960s

4.6 Engaging psychic multiplicities

Turning to consciousness itself, what William James in 1890 described as a 'teeming multiplicity of objects and relations' has proven a rich site for research into intra-psychic forms of participation. Recognizing with the phenomenologists the impossibility of fully escaping our own experience, those interested in navigating altered and/or multiple states of consciousness employ techniques such as dreamwork, the use of psychoactive substances, meditative techniques, breathwork, fasting and drumming. The philosopher Aldous Huxley drew on Henri Bergson's subtractive notion of consciousness in positing that a 'cerebral reducing valve' exists in the brain in order to channel the vast totality of sensory experiences into manageable experience, and that this valve can be opened up through various techniques including the use of psychedelic substances.⁶⁶ This led to the widely-held claim in the counterculture of the 1960s and subsequent 'New Age' that we can more fully participate with more-than-human entities, and even the infinite itself, through practices of cleansing our Blakean 'doors of perception'.⁶⁷

66
Huxley 1954.

67
See Smith 2009. The titles of Huston Smith and Aldous Huxley's books draw from Blake's poem: 'If the doors of perception were cleansed every thing would appear to man as it is, Infinite. For man has closed himself up, till he sees all things thro' narrow chinks of his cavern' (Blake 1790).

Combining an inquiry into the varieties of conscious experience with attention to the political challenges posed by the subaltern, in 2014 Gail McConnell, Jo Collinson Scott and Deborah Maxwell conducted **Listening to Voices: Creative disruptions with the Hearing Voices Network**, a community-based participatory research project with the Hearing Voices Network (HVN). The latter is an international peer-led network of local self-help groups attended by people who hear voices that only they hear.⁶⁸ The researchers describe how medical professionals and healthcare support providers have tended to encourage voice-hearers to silence their voices, in particular through psychiatric drugs, rather than listen to them. Joining with the HVN, the researchers – themselves with expertise in poetic, musical and narrative voice – attempted to foreground not individuals with voices but 'voice' itself, in all its manifestations – for instance, as common human experience, as pathology, as friend, as agitator, as advisor and as aside. Recognizing that listening is a more active process than merely hearing, the project asked how creative listening practices could enable individuals and communities to become more attuned to voices previously marginalized, repressed or ignored, to disrupt academic and medical hierarchies of knowledge and power. Instead of 'giving voice' to the voice-hearers, the researchers sought to re-imagine academic writing practices themselves, by bringing the multiple voices of academia itself (such as the subjective, doubting, meandering, hyper-critical and comic voices one finds relegated to footnotes) into conversation with the voice-hearers who were recognised as experts in voice-hearing.

The project was participatory and unfolded iteratively, centred around a retreat for researchers, artists and voice-hearers where they explored the relationships between HVN members' expertise in listening to, and engaging, multiple voices, and musical, poetic and storytelling-based artistic practices. Participants co-created a *Listening to Voices* guide, outlining best practice when listening to voices and voice-hearers.⁶⁹ The initial text of the guide was overwritten in numerous voices – living, dead, imagined, self-critical, angry, reflective, analytic – until the play of voices became more important than any original message. The methodology was one of collectively 'writing on the object', rather than 'writing about the object'. By making visible and audible the creative disruptions (in, for example, 'overwriting', annotations and footnotes), the final texts attempted to foreground what was challenging and meaningful about the collaborative process and the politics of authorization. The palimpsest of responses in the guide illuminated process, the struggle for meaning and the numerous iterations the guide had undergone (*Figure 6*).

Listening to Voices showcases the futility of hoping to fully or comprehensively represent experiences in participatory research practices where subjects continuously react to how they are represented. This highlights the importance of appreciating the performative register in contexts where representative projects call forth infinitely regressing loops. *Listening to Voices* responds to the exasperation in seeking authorial finality through its techniques of constant narrative disruption.

⁶⁸

See <http://www.listeningtovoices.org.uk/>
For the Hearing Voices Network, see
<https://www.hearing-voices.org/>

⁶⁹

'Listen (if you dare): An unlikely companion to voice-hearing', available at <http://www.listeningtovoices.org.uk/res/ListenIfYouDare.pdf>

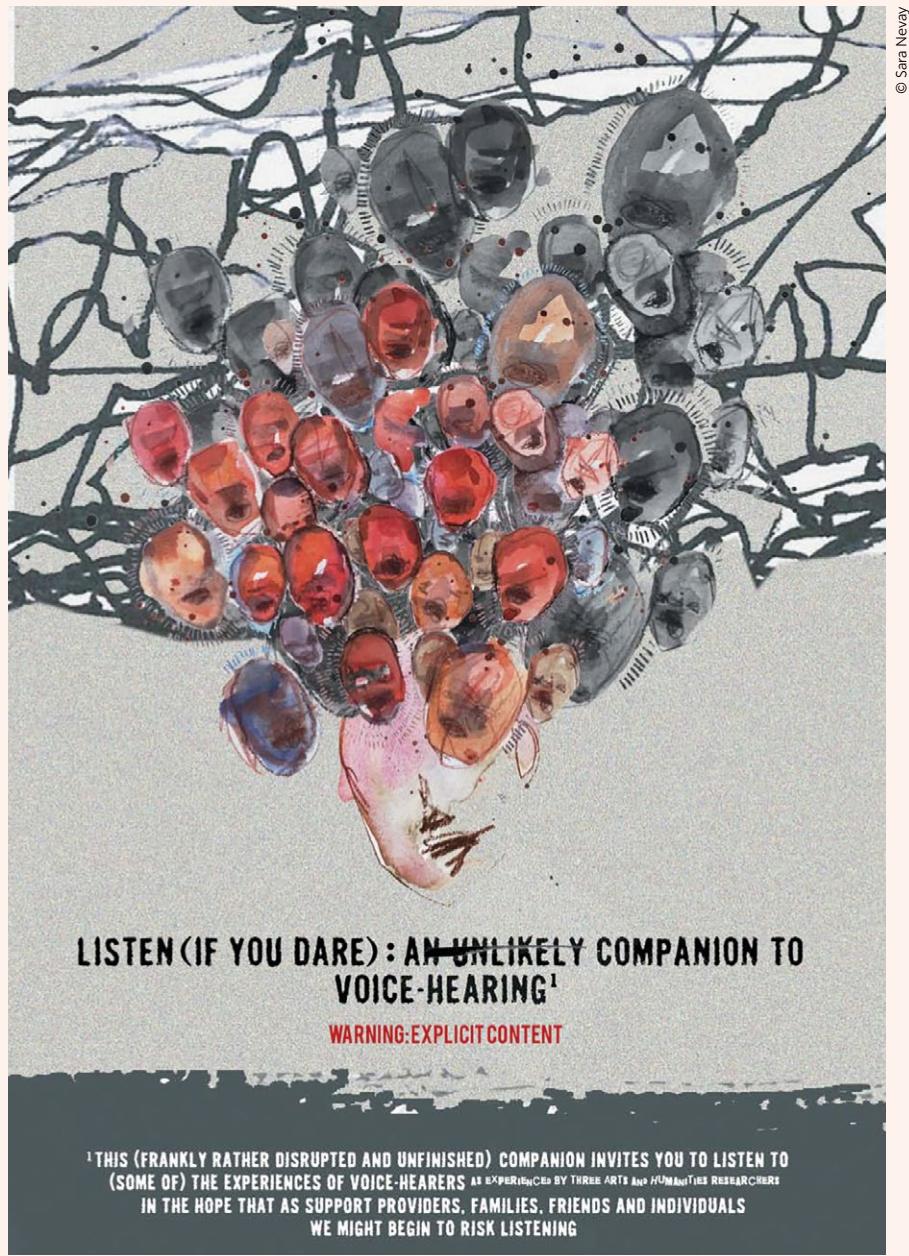


Figure 6
Listening to Voices guide

5. SUMMARY

More-than-human research does not seek to reveal the minds of non-humans, as if non-humans could suddenly speak. Nor does it mean necessarily imputing a special kind of subjectivity to non-humans. While perspectival multinaturalism (see section on 'more-than-human communication' above) does claim this, science studies and post-phenomenological approaches do the opposite, being more concerned with the objective capacities of a wide range of inter and intra-psychic agents to perceive, act and react, while multi-species ethnographies turn to material semiotics to adumbrate the richness of language systems. All the case studies referenced here offer ways of conducting more-than-human participatory research enabled by speculative leaps of various kinds, whether the invention of concepts, the stating of working hypotheses or inferences about other worldviews. We suggest that attending to the more-than-human encourages participatory methods to rub up against their limits in generative ways. This is what makes more-than-human participatory practice an exciting research intersection.

Yet the nomenclature of more-than-human, and a yearning to research the 'other', will always risk devaluing the emancipatory, rights-based politics of the liberal bounded human self. Moreover, we have sought to collaborate with community partners who were rightly concerned that the language of 'more-than-human' and 'non-human' carry the normative connotations of 'sub-human' and 'inhuman'. This can feed into the politics of coloniality and the subaltern in unintended and toxic ways. All efforts at going beyond the bounded, univocal subject problematized at the beginning of this review must therefore be done with care if they are not to reproduce the conditions for undermining progressive rights claims or slipping into an exclusionary normative register.

In describing speculative approaches, Isabelle Stengers draws upon the metaphor of dancers, hands joined and leaning back, spinning in a circle. No one dancer can achieve this on their own and yet together they form a sustainable configuration.⁷⁰ What differentiates the case studies offered in this review from those of others in this series is that they share in this speculative ethos, each posing methodologies whose components are interdependent and rely on one another for the methodology to gain its force, whether discursive or performative. In addition, the aesthetic components are foregrounded – unsurprising as speculative leaps are leaps of the imagination. Insofar as it will continue to unfold, more-than-human participatory research will rest upon the collection of methodological tools and experimental approaches attuned to experience beyond, beneath and beside the bounded human subject.

❖
All efforts at going beyond the bounded, univocal subject must be done with care if they are not to reproduce the conditions for undermining progressive rights claims or slipping into an exclusionary normative register.



⁷⁰

Stengers 2011: 239. For similar configurations, see the 'plateau' in Deleuze and Guattari 1987 and the 'constellation' in Benjamin 2009.

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GLOSSARY

Actor Network Theory

Views the social as being constructed through creative associations between varied human and more-than-human agents. Associated with Bruno Latour, Michel Callon and John Law, Actor Network Theory (ANT) highlights the constitutive role of non-humans in social life, describing agency as an outcome of 'actor networks', not subjects or objects in isolation.

Agency

Traditionally defined as an ability to act and think. It is generally seen as something that comes from consciously held intentions, and as resulting in observable effects in the human world. This definition makes agency something that only humans exercise. More-than-human research problematizes this by suggesting, for instance, that human 'agency' is actually a composition of the agencies of many different entities, and/or that non-humans (including animals, materials, and objects) can also exert forms of agency.

Anthropocene

The name of a purported new geological age, replacing the Holocene, that is marked by the point in history where humanity became a geological agent, acting as a key determinant of the environment of the planet, through the burning of fossil fuels, carbon emissions, nuclear radiation, and other geophysical processes. The term is significant for its challenge to modern understandings of nature as a stable domain that is separate from the realms of history, culture and society.

Biopolitics

A way of governing that takes life, especially biological life, as a key value and target of intervention – attempting to make societies healthier, more vigorous, more full of vitality. Biopolitical rationalities have supported visions of an organic, vital, healthy human society. However, biopolitics can also result in a politics of death, when certain groups are believed to be so damaging to collective vitality that they must be destroyed. One focus of contemporary biopolitics is not only on how to promote life, health and vitality, but on what counts as life, and how that life is to be valued.

Decolonial

Approaches that seek to confront and overcome colonial matrixes of power. Existing as long as colonialism itself, decolonial approaches draw on 'subaltern', marginalized knowledges and practices originating from outside of, or in opposition to, European hegemony and the 'Western canon'. They are committed to exposing, opposing and supplanting the racialization, instrumentalization and dehumanization wrought by ongoing legacies of colonialism.

Ecofeminism

Brings together feminist and ecological politics to emphasize the radical interconnectivity of humans, animals, spirits, and the earth. As a movement, ecofeminism stresses the inseparability of spirituality, culture and politics. It is associated with pagan religious traditions, aiming to develop ways of thinking and experiencing that were based on embodied, intuitive relations with the earth.

More-than-human

Describes how human societies are always composed of varied relations between humans and non-human forces and agencies such as objects, animals, microbes, and technologies. It challenges the idea that humans are separable from their worlds, or society is separable from nature. More-than-human can refer to realms or entities beyond the human, or to larger ensembles that include the human.

Multi-species ethnography

Aims to produce rich, detailed, 'thick' descriptions of the distinctive experiential worlds, modes of being, and social and cultural attachments of other species. Drawing upon and adapting methods developed for research with humans alone, multi-species ethnography calls for ways of listening to, and building stages for voicing, the interlaced agencies of humans and non-humans alike.

Perspectival multinaturalism

Advances cosmologies in which non-humans also have selves or souls when understood from their own perspective. Drawn from the work of Eduardo Viveiros de Castro, all selves are understood to partake of similar phenomenal worlds or 'cultures', despite having very different bodily manifestations or 'natures'. The resulting 'multinaturalism' contrasts with the Western notion of 'multiculturalism' by proposing that it is our mindedness rather than our physicality that we share with non-human others.

Post-phenomenology

A form of thought that is indebted to, but in some ways departs from phenomenology. Phenomenology focuses upon the human subject as an embodied vessel of experiences and sensations. Post-phenomenology retains this interest in embodiment and experience, but views experience as distributed across, and mediated through, both human and non-human bodies, technologies, objects, and worlds.

Pragmatism

A philosophical movement that argues that what counts as true knowledge is determined by its usefulness. It is a philosophy that takes practices as its starting point. Ideas are labelled true when they enable humans to get things done, and to cope with the world. More-than-human researchers point out that practices involve many different kinds of actor, and not just human achievements.

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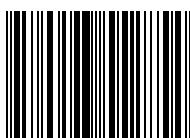
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