

13

WHAT'S ONTOLOGY GOT
TO DO WITH IT?On the knowledge of nature and the nature
of knowledge in environmental anthropology*Sian Sullivan*

I don't know if you've ever had the . . . experience of having your life changed by a quite trivial incident. . . . It happened to me on that trip. I was on the *Southern Cross* – that's the mission boat – and there was a group of islanders there – recent converts. . . . And I thought I'd go through my usual routine, so I started asking questions. The first question was, what would you do with it if you earned or found a guinea? Would you share it, and if so who would you share it *with*? It gets their attention because to them it's a lot of money, and you can uncover all kinds of things about kinship structure and economic arrangements, and so on. Anyway, at the end of this – we were all sitting cross-legged on the deck, miles from anywhere – they decided they'd turn the tables on me, and ask me the same questions. Starting with: What would *I* do with a guinea? Who would I share it with? I explained I was unmarried and that I wouldn't necessarily feel obliged to share it with anybody. They were *incredulous*. How could anybody live *like that*? And so it went on, question after question. . . . They were rolling round the deck by the time I'd finished. And suddenly I realised that *anything* I told them would have got the same response. . . . And I suddenly saw that their reactions to my society were neither more nor less valid than mine to theirs. And do you know that was a moment of the most *amazing* freedom. . . . It was . . . the *Great White God* de-throned, I suppose. Because we did, we quite unselfconsciously *assumed* we were the measure of all things. That was how we approached them. And suddenly I saw not only that we weren't the measure of all things, but that *there was no measure*.

(*Anthropologist W. H. R. Rivers (1864–1922) who conducted ethnographic research amongst Torres Straits islanders in the late 1800s, speaking in Barker [1991: 241–242].*)

Introduction: ontological dimensions in environmental anthropology¹

If there is anything normative about 'environmental anthropology' it is the intention to understand, as far as possible, the internal or emic logic of specific culture/nature practices and values: all those culturally-inflected norms and actions that shape specific human

1 relationships with more-than-human others. In this endeavour, the sub-discipline builds on
2 the will in socio-cultural anthropology more broadly to understand observed cultural
3 phenomena in the terms through which they are understood by their practitioners. For
4 Malinowski (1922), writing of the birth of participant observation that became anthropology's
5 methodological trademark, this meant understanding 'the native's point of view'. For Geertz
6 (1973), writing several decades later, it meant reaching towards a 'thick description' of
7 culturally-embedded practices and the worldview of 'the other': one that is deep, nuanced,
8 and internally appropriate, as opposed to a 'thin' or superficial projection that says more
9 about the values and assumptions of the observer than the reality of the observed. In recent
10 years, and drawing on diverse cultural knowledges of the 'nature of nature' found globally,
11 this fine-tuned attention to the realities of the other has emerged as an 'ontological turn' in
12 anthropology, confirming a 'multiplicity of forms of existence enacted in concrete practices'
13 (Holbraad *et al.* 2014: online; also Descola 2013).

14 Anthropology at its heart, then, affirms diversity in both cultural knowledges of the world,
15 and in the very nature of the worlds that are culturally known. This diversity of knowledge-
16 and-nature couplings shapes the varied forms of ethos and ethical praxes enacted culturally
17 in the world (see also Bourdieu 1992). As alluded to in the fictionalised passage by anthro-
18 pologist W. H. R. Rivers that opens this chapter, non-judgmental curiosity and openness
19 regarding this diversity are virtues on which the practice of ethnography that is so critical
20 to the discipline builds. Practitioners of anthropology may have their own normative views
21 of what the most appropriate nature-knowledge relationship might be, views that might be
22 shaped by ethnographic and other encounters with the world. But it is from curiosity and
23 openness to empirical circumstances that ethnographic understanding can arise.

24 In environmental anthropology more explicitly, a move towards ontological considerations
25 seems to have intensified as researchers have dug more deeply into divergences regarding the
26 assumed nature of reality, as revealed by differences in how environmental phenomena are
27 framed and thereby constructed culturally. Concentrating in the 1990s, detailed research by
28 environmental anthropologists, particularly in African contexts, demonstrated that a range of
29 'received wisdoms' regarding environmental phenomena, in response to which development
30 policies were being designed, could be understood instead as knowledge constructions built
31 discursively with significant power-effects in terms of access to land and 'resources' (see,
32 for example, Richards 1985; Homewood and Rodgers 1987; Fairhead and Leach 1996;
33 Leach and Mearns 1996; Reij *et al.* 1996; Sullivan 2000). These studies demonstrated that
34 powerful national and international discourses regarding environmental phenomena, which
35 often tended to demonise the use and value practices of local people in the contexts
36 researched, could be destabilised and deconstructed by bringing varied sources of data to bear
37 on their key assertions. As such, these researchers assumed a *critical realist* approach to the
38 acquisition of knowledge regarding the nature of environmental change(s). They affirmed
39 an objective environment 'out there' that can be known through empirical research
40 methodologies, while asserting that the deployment of methods and data to produce policy-
41 relevant environmental knowledge also reflects 'regimes of truth' shaping prominent views
42 of the world and associated powerful interests. Among environmental anthropologists,
43 geographers, and political scientists alike, this Foucaultian-inspired orientation towards
44 empirical understanding of the constructed nature of dominant environmental knowledges
45 and discourses has been key to the emergence of the field of 'political ecology' (see e.g.
46 Bryant and Bailey 1997; Stott and Sullivan 2000; Adger *et al.* 2001; Forsythe 2003; Robbins
47 *et al.* 2010; the nexus of power/knowledge and the ideological functions served by science
48 are emphasized in Foucault 1980, 1982).

Recently, and associated with a consolidated ontological turn in the social sciences and humanities more broadly (Smith 1981), anthropologists of culture-nature relationships have increasingly emphasised how different cultures globally may understand the nature of the natures they both utilise and with which they co-exist. Building on earlier work by anthropologists such as Hallowell (1960), diverse understandings of relationships between humans and natures-beyond-the-human (after Kohn 2013) have been shown to frequently include assumptions challenging to a modern scientific worldview' (see in-depth review in Descola 2013). Some of these understandings are considered below. But before thinking through what ontology has to do with the knowledge of nature and the nature of knowledge, let's explore the nature of ontology.

On 'ontology'

Ontology as a form of enquiry asks questions regarding the nature of being so as to make assertions regarding the known nature of reality and how this can be legitimately known. Ontological assumptions denote what entities can exist, into what categories they can be sorted, and by what practices and methods they can be known (i.e. epistemology). A cross-cultural perspective affirms that cultural and historical differences create the possibility for *plural ontologies*. It suggests the parallel existence of different ways of understanding how reality is constructed, how the world and its entities can be known, and what constitutes appropriate ethical praxis in relation to these entities. From an anthropological as well as a postcolonial perspective, Western assumptions regarding how nature is constituted, while universalising, are understood in fact to be highly *particular* (Chakrabarty 2000). They are embedded in and made possible by particular cultural and historical contexts that do not necessarily translate well into non-Western cultural experiences (Viveiros de Castro 2004; Descola 2013; Kohn 2013). Indeed, ontological plurality can be found in perhaps the unlikeliest of places. Even the hardest of sciences, namely physics, makes varied and contested observations regarding the foundational nature of being and the methods through which this can be known. The radical historical shift from Newtonian mechanism to quantum indeterminacy within the last hundred years, and the current variety of views regarding underlying universal phenomena (particles, strings, plasma, etc.), illustrate this diversity.

Of relevance at this moment of global environmental predicament is that we find ourselves living in the shadow of two thousand years of hierarchical value-ordering in Western thought regarding the relationships of different orders of being, as summarised in Table 13.1. This ordering became consolidated in the 'Cartesian moment' of the Enlightenment, when philosopher René Descartes famously asserted a dichotomy between mind and body, and simultaneously privileged a transcendent reasoning 'mind' over the brute, mechanistic matter of 'the body' (Descartes 1968 [1637]; Hall 2011; Marder 2013; also Abram 2010: 159–181). The translation of this dichotomy into an equally constructed split between culture and nature was additionally accompanied by a demotion of non-human entities into machine-like 'automata'. In 'Discourse 5' of Descartes' *Discourse on Method*, he writes of animals that:

they do not have a mind, and . . . it is nature which acts in them according to the disposition of their organs, as one sees that a clock, which is made up of only wheels and springs, can count the hours and measure time more exactly than we can with all our art.²

(Descartes 1968 [1637]: 75–76)

Table 13.1 Plato's and Aristotle's ontological value hierarchies of faculties of soul.

Plato		Aristotle	
spirited	enabling activity and volition	intellective	rational soul possessing mind/reason 'human excellence'
rational	enabling intelligence and self-control associated with reason/mind/ opinion and located in men who are thus able to rule	locomotive	mobility found in <i>humans and animals</i> but <i>not</i> plants
appetitive	associated with pleasure/pain/ desire as well as passivity located in the ruled – slaves, women, children and slaves plants as fixed, rooted, passive	desiderative	able to desire, i.e. to have appetite, passion, wish – found in <i>humans and animals</i>
		perceptive	able to sense pleasure and pain – found in <i>humans and animals</i>
		nutritive	mechanical ability to feed and reproduce. <i>plants</i> possess only this 'soul', i.e. otherwise rendered as passive

Source: Based on Hall (2011: 19–26) after Plumwood (2006).

Through this entrenched dichotomisation and hierarchisation, a reality has been constructed and normalised whereby only humans, and often only particular humans, possess intelligence and mind. At the other end of the hierarchy, plants, for example, are viewed merely as 'vegetables' – dispossessed of the capacities of agency, movement, perception, communication, and intentionality, and thus usefully backgrounded as existing only for the instrumental ends of humans. The accompanying 'naturalist' (Descola 2013) ontological production of a nature-beyond-the-human that is distant, stilled, and 'outside', has additionally created this nature as usefully amenable to objectification, instrumentalisation, and myriad associated violations.

In this hierarchical ontology, consolidated over the last few centuries of Western thought, a tendency has been for only the intelligence characteristic of (particular) human entities to confer moral consideration, since only this intelligence is understood as possessing scope for communication, purpose, and subjectivity. The ontological denial of these latter faculties in other kinds of embodied being including, historically, the bodies of the non-Western human 'other' (as conveyed in brutal detail for South American imperial contexts in Taussig 1987) has permitted the doing of harm without *recognition* that harm has been done. Although often it is more complex than this, in that the denial of capacities for communication, purpose, and subjectivity in 'non-human others' perhaps manifests more as *disavowal*: as the simultaneous acknowledgement of harms caused, accompanied by a strategy – an apparent solution – to seemingly mitigate this harm (after Freud 2009 [1938]). An early example of this, and of the pathology that such 'solutions' can embody, comes from the post-Cartesian vivisectionists. While operating in a Cartesian mode, i.e. construing animals as soulless automata, these scientists would also cut the vocal cords of their experimental subjects so that they would not be able to hear the ensuing cries of pain (Hornborg 2006: 24; after Evernden 1985: 17–21). Through this apparent 'solution', the scientists' embodied acknowledgement of the communicative and experiential capacities of animals was denied, so as to literally make the animals subject to their experiments into mute objects. Strategies of disavowal – of the simultaneous acknowledgement of, and turning away from, harms caused – abound today through the sale and purchase of various forms of tradeable 'offsets' for 'solving' problems of

environmental harm. Purchase of environmental ‘credits’ (such as carbon or biodiversity offsets) generated in one place are thus considered to ‘solve’ damage effected somewhere else, although arguably such ‘solutions’ also entrench a disconnection (or splitting-off) from the continuation of damage-producing behaviours that such offsets require (Sullivan 2013b, drawing on Fletcher 2013).

Ethnography – the methodological attempt to understand in detail the makings of social reality in different cultural contexts, *without necessary recourse to ‘the West’ as the measure of all things* – can assist with illuminating the shape of different cultural ontologies regarding relationships between humans and other-than-human entities. For some environmental anthropologists this may involve a further normative dimension. This is because ethnographically-grounded elucidations of ‘non-Western’, ‘amodern’ and non-capitalist culture natures can both clarify the ontological underpinnings justifying the more destructive dimensions of advanced and expansionary capitalist and industrial societies, while containing seeds of corrective and alternative possibilities.

In particular, it is hard not to notice that many indigenous communities globally – i.e. cultures who have retained some degree of long-term, continuous ancestral connection with land areas – are frequently also associated with localities now celebrated for their environmental health as ‘biodiversity hotspots’ (Gorenflo *et al.* 2012). Biodiversity hotspots, as framed by conservation biologists (Myers *et al.* 2000), are geographical areas characterised by high species diversity and the incidence of endemism and rarity, set within a broader context of environmental degradation that bears the hallmark of a global anthropogenic extinction event. Human cultural arrangements in these contexts have been associated with the maintenance of relationships with diverse natures-beyond-the-human, despite immense modern pressures to transform such cultural landscapes in the interests of economic growth. As Gorenflo *et al.* (2012: 8037) state, ‘the tendency for both [biological and linguistic diversity] to be high in particular regions suggests that certain cultural systems and practices, represented by speakers of particular indigenous and nonmigrant languages, tend to be compatible with high biodiversity’.

Environmental anthropology has a critical role to play in generating nuanced understanding of the ontologies that have made it possible for human cultures in these contexts to maintain particular relational sustainabilities. The sub-discipline can thus assist with enhancing awareness regarding possibilities for living in more accommodating ethical relationships with many kinds of selves, only some of whom are human (Ingold 2000; Kohn 2013; Sullivan 2013; Hannis and Sullivan forthcoming). In the next section I review some ontological themes that seem consistent among the cultures considered by Gorenflo *et al.* (2012) to be ‘compatible with high biodiversity’.

Animist ontological tendencies

Remaining indigenous cultures living on the edges of an expansionary capitalist modernity in landscapes of high conservation priority often exhibit ontological assumptions and associated practices of use and appreciation that can be described using the signifier ‘animism’. Put simply, animist ontologies assume the alive sentience of other-than-human natures, affirm the possibility of agency enacted by ‘non-human’ entities and tend to adjust human relationships with these entities accordingly. The term ‘animism’ enfolds pagan cultures framed as ‘mistaken primitives’ positioned prior to the attainment of Enlightenment rationality by Edward Tylor in his theory of religion (Tylor 1913 [1871]) with postmodern ‘eco-pagans’ of the industrial West, for whom animism is a contemporary eco-ethical ‘concern with

1 knowing how to behave appropriately towards persons, not all of whom are human' (Harvey
 2 2005: xi). As such, 'animism' is both 'a knowledge construct of the West' (Garuba 2012: 7),
 3 and a universalising term acknowledging a 'primacy of relationality' (see also Bird-David
 4 1992; Ingold 2006) and a set of affirmative practices that privilege an expansionary
 5 intersubjectivity which resists the objectification of non-human others (Franke 2012: 4, 7).
 6 Below I summarise some key tendencies in both perception and practice that ethnographic
 7 study suggests are prominent in animist ontologies, drawing on diverse literatures as well as
 8 ethnographic field research in varied contexts over more than 20 years.

10 *Primal time and the cultural kinship of beings*

11
 12 In the beginning, people and animals were related: not so much in terms of their shared
 13 biology, but in the sense that they shared language, culture, and kinship. Assertions of such
 14 a 'primal time' are key to understanding a range of indigenous/animist ontologies: from
 15 KhoeSān peoples of southern Africa (Solomon 1997; personal field notes) to Amerindian
 16 peoples of the Amazon (Viveiros de Castro 2004). Because people and animals were of the
 17 same order in the past they continue to exist in agential and reciprocal relationships in
 18 the present, with animals and other 'non-human' entities retaining communicative and
 19 subjective attributes that confer personhood (Hallowell 1960; Harvey 2005; Brightman *et al.*
 20 2013). Humans can empathically experience and intuit the presence and experiences
 21 of animals, for example, and the possibility of one transforming into or lodging in the
 22 other remains.

23 Anthropologist Eduardo Viveiros de Castro (2004) thus speaks of the *multinatural*
 24 'perspectivism' of cosmologies associated with peoples of the Amazon, positing this as the
 25 understanding that all beings share culture, kinship, and reciprocal relationships, their
 26 perspectives differing due to being seated in different bodily affects (or 'natures'). Key aspects
 27 of this proposition are as follows: an original culture ~~that is~~ disaggregated into different
 28 embodied perspectives; ~~all~~ animals and plants ~~being~~ conceived as subjects/persons sharing a
 29 spirited hypostases cloaked in different embodied perspectives; and all embodiments ~~as~~
 30 sentient, alive, and able to act with intentionality. Ecological relations thus are social relations,
 31 with all *persons* able to share and exchange knowledge. Communication and even
 32 transformation between such different embodied perspectives is an intrinsic possibility and
 33 exists in contradistinction to the naturalism of modernity, which proposes a shared universal
 34 Nature from which human culture and Reason rise and become progressively separate (as
 35 critiqued in Gray 2002). The 'Amerindian' conception instead is that 'having been people
 36 [in the mythological past] animals and other species continue to be people behind their
 37 everyday appearance', endowed with the soul or spirit that personifies them (Viveiros de
 38 Castro 2004: 467; also cf. Biesele 1993 for Kalahari Ju|'hoansi contexts). As such, 'non-
 39 humans', including ancestors and spirits, are attributed with 'the capacities of conscious
 40 intentionality and social agency' (Viveiros de Castro 2004: 467). They are understood as
 41 subjects with empathically knowable and communicable subject positions that complexify
 42 possibilities for social and moral action.

44 *Agency beyond-the-human*

45
 46 Agency, shaped by the different bodily perspectives of actants, thus is present everywhere.
 47 This means that all activity – by animals, components of weather, plants, spirit-beings,
 48 ancestors, and so on – is simultaneously imbued with a moral, if relative and frequently

ambiguous, dimension (Ingold 2000). Of particular relevance, and as emphasised by Eduardo Kohn, are the ethical perspectives and practices that may arise when people live as if other kinds of being can see 'us', so as to act as if the way(s) that 'they' see 'us' matter. As Kohn (2013) writes:

How other kinds of beings see us matters. That other kinds of beings see us changes things. If jaguars also represent us – in ways that can matter vitally to us – then anthropology cannot limit itself just to exploring how people from different societies might happen to represent them as doing so. Such encounters with other kinds of being force us to recognize the fact that seeing, representing, and perhaps knowing, even thinking, are not exclusively human affairs.

(Kohn 2013: 1)

In the west Namibian field context in which I conduct ethnographic research, for example, and although attenuated through displacement, acculturation, and the variously disruptive effects of modernity, various ~~≠Nū-Khoen~~ and ~~||Ukun~~ *!haoti* (i.e. land and lineage groupings) have lived in a world of multiple, layered, and interacting agencies that have demanded appropriate practices and observations (Hannis and Sullivan forthcoming). Ancestral agencies associated with potent places are thus connected with through greeting and offering practices, through which ancestors (*kai khoen* – i.e. big or old people) in the realm of the spirits of the dead are requested to act in the present to open the road so that travellers can see the best way to go. They are asked for guidance regarding the most appropriate ways to do things, and their support is evidenced through the intuitions people receive in response to queries that may arise as they are travelling. They are also asked to mediate the activities of potentially dangerous animals such as lions, who are understood very much as other *ensouled* beings who assert their own agencies and intentionality (see below). Ontologically, the ancestors are spirits or souls that have left humans whose bodies have died. As these spirit beings they have ontological reality in the present: they are not simply people who lived in the past, nor are they entities that require worship or blood sacrifice (as occurs in other African contexts; cf. Lewis 2015). They are understood more as specific types of entities that, through pragmatic relationship practices, are called upon to intervene – to assert agency – in the present, so as to influence outcomes.

Sometimes this includes intervention in the agency of other non-human agents, such as lions, a species with which humans in this context continue to live in close contact, as they have done throughout the remembered past. Lions are a key and formidable predator, encounters with whom may result in the loss of human life, or the life of herded livestock. Nonetheless, people in the past sought them out in order to scavenge meat from their kills, and lions figure in peoples' realities as animals imbued with agency and intentionality. Just as Kohn (2013) describes for Runa interactions with jaguars, and Brightman *et al.* (2013: 8) review for cultural interactions with bears and jaguars in Siberian and Amazonian contexts respectively, lions are conceived as being able to see, recognise, and represent the people they encounter and interact with. The proximity of lions to humans is indicated by calling to lions as 'big brother', 'big head', or as a 'big dog' (since dogs are seen as also socially close to humans) – names which denote respect and proximity. In non-ordinary states of consciousness associated with healing, KhoeSān reality also embraces the perceptual possibility of shapeshifting between lions and humans (for discussion of conceptual and material mutability in KhoeSān thought, see Guenther 1999; Sullivan and Low 2014).

1 In this context, animals generally are considered to be cognate with humans not so much
 2 because of their biological and morphological similarities, as in natural history and evolutionary
 3 perspectives (although these are important), but because like humans they are animated by
 4 a soul that passes from them when they die, and that confers to individuals a sense of self.
 5 It is this soul that gives humans and animals their unique smell or ‘wind’, confers their
 6 abilities to move as well as to assert agency and intentionality, and also informs the qualities
 7 of action and behaviour from which humans learn how to act appropriately. In the West,
 8 by contrast, and as noted above, the conceptual removal of ‘soul’ from animals was achieved
 9 by Descartes’ affirmation that they were merely ‘soulless automata’ (Descartes 1968 [1637]:
 10 75–76), an ontological strategy that has arguably sanctioned ruthless instrumentalisation of
 11 animals by justifying moral indifference (Callicott 2013: 112; Sullivan in press). In the
 12 ||Khao-a Dama context, asking whether or not animals have a soul is responded to as a
 13 derisory question. Indeed, an indication of how radical Descartes’ proposition was even in
 14 the European context of the 1600s, is the fact that this Enlightenment moment overlapped
 15 with centuries of so-called ‘animal trials’ which took place throughout Europe from the
 16 thirteenth to the eighteenth centuries (Cohen 1986). In these trials, non-human animals were
 17 attributed such subjectivity, intentionality, and personhood; that they were treated as legal
 18 persons requiring professional representation.

19 Agency and intentionality can be extended further still in west Namibia to include the
 20 actions of a particular class of plants referred to by the adjective *soxa* as well as to physical
 21 phenomena. Regarding the latter, for ||Khao-a Dama and other related KhoeSān peoples,
 22 it is the personified, supernatural force behind the phenomena of rain – known here as |*nanus*
 23 – that asserts agency in selecting those humans who become healers. Healers are thus known
 24 as |*nanu-aob* or |*nanu-aos* – meaning literally man or woman of the rain. When someone is
 25 called by |*nanus* they experience a psychological transformation precipitated by a loss of a
 26 sense of self. They go into the field (!*garob*) and wander around, lost to the normal world of
 27 everyday waking ego consciousness. On realising that they have disappeared, people of their
 28 community go looking for them singing the songs of healing dances called *arus*. It is when
 29 the nascent |*nanu-aob/s* hears the enchanting threads of the familiar songs of the *arus* that
 30 they are able to re-enter the normal social world, having been ‘opened’ by |*nanus* so that
 31 they can see sicknesses of the people. By virtue of their selection by |*nanus*, combined with
 32 ritualised practices of consumption of particular rain- and healing-associated substances –
 33 such as the *soxa* plant *tuhorabeb* (‘*tu*’ = rain; see also Schmidt 2014: 147) which assists with
 34 being able to see – healers are conferred certain powers of perception that permit them to
 35 see and cure sickness. These powers are independent of other forms of leadership, so are not
 36 necessarily consistent with any sort of political authority (see also Clastres 1988).

37 This final example takes us towards what might be conceived as the ‘ontological edges’
 38 of modernity, to extend a currently lively seam of work in the humanities that explores and
 39 opens up some of these ontological edges. This includes work encouraging recognition of
 40 the biologically-grounded ontologies of being of non-human species towards more sensitive
 41 attunements with other-than-human presence (see e.g. Haraway 2008; Flusser 2011 [1987];
 42 Marder 2013), as well as work that takes seriously the socio-ecological and ethical demands
 43 of materiality (see e.g. Bennett 2010; Jackson 2013). But for anthropologists and others
 44 working in variously ‘non-modern’ cultural contexts, there is a whole *other* ontological edge
 45 that demands to be taken seriously, as gestured towards in the examples above. This is
 46 the diverse world of both ancestors and spirits, which in many cultural contexts are known
 47 and encountered as agency-enacting entities with ontological reality. As Kohn (2013: 217,
 48 216) writes, ‘spirits are their own kind of real’ emerging ‘from a specifically human way of

engaging with and relating to a living world that lies in part beyond the human', that is 1
 discounted in the ontological assumptions informing scientific endeavour (Chakrabarty 2
 2000). Since the spirit realm has its own future-making logics and habits, Kohn remarks 3
 additionally that how this reality is treated 'is as important as recognizing it as such' (2013: 4
 208, 216). An expanded relational and reciprocal ontology thus opens multiple vistas for 5
 consideration, with implications for ethical praxis and future flourishings. 6

Reciprocity and the moral economy of sharing

Animist ontologies and associated practices, as indicated in the descriptions above, illuminate 8
 how people might live in specific relational contexts with different kinds of agency-asserting 9
 entities, only some of whom are human. What seems clear from such contexts is the insistence 10
 on an expanded zone of agency that includes entities beyond-the-human (Sullivan 1999; 11
 Kohn 2013; Behrens 2014; Kelbessa 2014), as these are embedded and constituted in specific 12
 and dynamic relational settings (see also Whatmore 2002; Castree 2003). The attribution of 13
 agency to multiple beings beyond-the-human makes possible both an expanded sphere of 14
 moral agency and considerability, as well as relations of reciprocity with these other-than- 15
 human entities. 16
 17
 18

A great deal of ethnographic research regarding cultural relationships with natures- 19
 beyond-the-human confirms this open and extended reciprocity, and an associated moral 20
 economy of sharing that has the assumption and production of abundance at its core. Nurit 21
 Bird-David (1992), whose ethnographic work on 'animism' has been important for establish- 22
 ing key parameters in this sub-field, thus develops Marshall Sahlins' (1974) conception of 23
 'the original affluent society' through considering so-called hunter-gatherer conceptions of 24
 the provisioning roles of other-than-human natures in such economies. Her ethnographies 25
 are of Nayaka of South India (also see Bird-David and Naveh 2008), Batek of Malaysia and 26
 Mbuti of Zaire. Their orientations to non-human natures are understood in terms of assum- 27
 ing 'the environment' to *give to* humans in a profound 'economy of sharing' that mediates 28
 human-with-human and nature-with-human provisioning. 'Non-human' natures are 29
 'humanised' such that they are known as kin and as ancestral embodiments, as communica- 30
 tive agencies, and as friends. Landscape entities as well as non-human animal species are 31
 attributed with life and consciousness. An *order of goodness*, while at times ambivalent, in 32
 general is assumed. Such knowledges find expression in value practices oriented towards 33
 sung, spoken, and danced communication and multi-way gift-giving with non-human 34
 natures that are equivalently expressive (see below). All of these situate human persons as 35
 agents continually doing their part to maintain a moral and dynamically generative socio- 36
 ecological order of trust that implicitly is assumed to be both abundant and good. This 37
 assumption of abundance and the associated 'full-subject' (i.e. there are none of the 'gaps' 38
 associated with alienation; see Glynos 2012: 2379) mitigates against a need for excessive 39
 consumption or hoarding of possessions. 40

Specific cultural innovations assist with the maintenance of this sense and assumption of 41
 abundance. Ongoing work by anthropologist Jerome Lewis (2008) with Mbendjele Yaka of 42
 Congo-Brazzaville (Republic of Congo) thus emphasises the importance of appropriate 43
 sharing through the guiding concept of *ekila*. As Lewis (2008: 13) states, 'for Yaka, people 44
 should be successful in their activities because nature is abundant. If they are not, it is because 45
 they, or somebody else, has ruined their *ekila* by sharing inappropriately'. Significantly, '*ekila* 46
 regulates Yaka environmental relations by defining what constitutes proper sharing' (Lewis 47
 2008: 13). *Ekila* is ruined by such actions as not sharing hunted meat, being excessively 48

1 successful and thus engendering envy, by inappropriately sharing sexuality, or by sharing
 2 laughter in such a way that the forest will not rejoice. By regulating potency through
 3 appropriate sharing, dynamic abundance is maintained for all. As Lewis (2008: 13) writes,
 4 such culture-nature ontologies and associated value practices have established a relationship
 5 with other-than-human-natures which has meant that Yaka people have ‘experienced the
 6 forest as a place of abundance for the entirety of their cultural memory’. This is in rather
 7 stark contrast with modern discourses of resource scarcity and the associated competitive
 8 and accumulative urgency to capture ‘values’ in both extractive industry and conservation
 9 activity.

10 For | | Khao-a Dama elders, while soul animates animals at the top of the food chain, such
 11 as lions, it also confers vitality and agency to much smaller creatures such as insects. Social
 12 insects such as harvester ants who harvest seeds subsequently gathered by people, and bees
 13 from whom people harvest honey, are valued extremely highly, not only for how hard they
 14 work to gather important foods that are then shared with humans, but also for the *egalitarianism*
 15 with which they share both this work and the resulting foods. Great care is taken by people
 16 when gathering seeds or honey from harvester ants’ nests and beehives respectively, so as to
 17 ensure productivity in future years. Human action reciprocally supports the harvesting work
 18 done by harvester ants, and neither seeds from harvester ants’ nests (seen as the ‘home’ – *oms*
 19 – of the ants in a manner that is parallel to the homes or *omti* of humans) nor honey harvested
 20 from beehives should be gathered in such a way as to leave nothing for the future sustenance
 21 of the ants or bees (Sullivan 1999).

22 These perceptions and practices mean that although humans are of course seeking to eat
 23 from the multiple kinds of selves with which they live, since these selves are conceived as
 24 variously able to also see, represent, and act, an expanded sense of reciprocity and relationality
 25 arguably informs these contexts (see also Kohn 2013; Hannis and Sullivan forthcoming). As
 26 Herman (2014: 141) asserts, ‘the most sustainable self is the one that insists least on its own
 27 sovereignty’.

29 ***Knowing ‘nature’ through ‘technologies of enchantment’***

31 Humans, everywhere, are dependent through pragmatic consumptive relationships on the
 32 ecology of selves amongst which we live. Animist relationality, however, tends to extend
 33 radically beyond these pragmatic relationships into relational dimensions beyond-the-human
 34 that deploy what Lewis (2015; following Gell 1999) refers to as ‘technologies of enchantment’
 35 (on enchantment, also see Curry 2016). Through making and experiencing intricate
 36 and intimate ‘technologies’ of song, music, rhythm, dance, stories, and costume, an array of
 37 affects are stimulated: aesthetic appreciation, senses of delight, wonder, and mystery,
 38 perceptual opening to the presence and forms of spirit-beings, and the experience of joy and
 39 connection with entities beyond-the-self.

40 As Lewis (2015) describes for the diverse array of ‘spirit-plays’ performed by the spectrum
 41 of BaYaka peoples who for millennia have inhabited the forested areas of central and west
 42 Africa:

43
 44 Each spirit-play contributes to an economy of joy – a system of distributing practices
 45 and knowledge that ensure particular euphoric states are repeatedly produced and
 46 available to all present. . . . Each spirit-play has its own characteristic style that creates
 47 a different quality of joyful experience. During the total darkness of no-moon *Malobe*,
 48 for instance, fires are put out and torches forbidden, participants huddle together in

the middle of camp with their legs resting on their neighbours', and their voices
 intertwine in a complex polyphony until tiny luminous dots float into camp producing
 a calm, wondrous and expansive joy. In the pitch black participants melt into one
 another and the forest.

(Lewis 2015: 7)

These varied rituals 'seduce non-physical entities (spirits) from the forest in order to establish
 something non-physical (spirit) in the sense of an uplifting or joyful atmosphere' that 'people,
 animals and the forest will feel' (Lewis 2015: 8). Skill and intention are deployed so as 'to
 enchant many senses', 'using strange sounds, stirring sights, beautiful songs and dance
 movements, humour and parody, touch and smell, emotions and desires, . . . trance and
 overlapping percussive rhythms' (Lewis 2015: 8). Through building enthusiasm among
 participants, 'the music takes on a life of its own' so as to reach 'astounding synchronicity'
 between singers, engendering euphoric experiences of beyond-self connections between
 people, spirits, and forest (Lewis 2015: 15).

In the healing dances of southern African San contexts, complex polyphonic songs sung
 predominantly by women and accompanied by driving syncopated clapped rhythms become
 similarly increasingly entrained, supporting the attainment of trance-states by healer-shamans
 in which they draw on information echoing from the primal/ancestral time of animal and
 human connections and are able to see and pull out sicknesses in the people (Biesele 1993;
 Low 2008, 2015; Sullivan and Low 2014; personal observation). For Amazonian shamans,
 technologies of enchantment arise through the singing of delicate spirit-songs (known widely
 as *icaros*) taught especially by plant spirits, which, in conjunction with potent psychoactive
 plant technologies, are sung so as to attain a focused perceptual openness in which forest
 spirit-beings can be seen and communicated with, and sicknesses can be seen and healed
 (personal observation). For ≠Nū Khoen (Damara) of west Namibia, *!geis* are songs sung
 alone or collectively sung and danced so as to appreciate and remember key events associated
 with particular places, animals, insects, and plants, and thus to stimulate 'happiness in one's
 heart'; while *arus* or healing songs and dances, frequently invoking the qualities perceived as
 associated with different animals, create the vibrant collective energies needed for a healer
 to see sicknesses and for healing to occur (personal observation).

These connecting and experiential practices of joy, enchantment, and participation in the
 agencies of beyond-human entities act to entwine human being, desire, and imagination with
 the interests of an ecology of selves-beyond-the-human. They are markedly different from
 a modern imaginary that fixes and instrumentalises nature and nature knowledge through
 surveys, measurements, maps, numerical models, economic values, and metrics. Some of the
 implications of this divergence will be considered briefly in the conclusion.

Conclusion

The above examples illustrate what might be thought of as ontological 'roughness' or
 diversity in animist praxis. This roughness can be seen in contradistinction to a modern
 impetus to reduce difference to seemingly commensurable and exchangeable units – as is
 privileged in the lingering mechanistic worldview guiding responses to contemporary
 environmental problems. In the latter, considerations of the specific agencies of different
 species and other non-human entities become swallowed, for example, in the desire to count
 forests in terms of units of carbon, for which a calculated unit is the same whether emitted
 from a coal-fired power station or stored in an Amazonian endemic tree. Similarly, a

1 biodiversity offset unit is an exchangeable measure that potentially creates equivalence
 2 between different species, habitats, and ecosystem presents and futures. As with the islanders
 3 mentioned in the epigraph opening this chapter, many cultures would roll around laughing
 4 at such proposals with their weird grasp on ‘reality’.

5 The contemporary offsetting practices mentioned here are based on an ontology that acts
 6 to discount the differences embodied and embedded in real bodies and places, so as to enable
 7 natures to be managed and controlled through decisions made from afar. The tendencies of
 8 animist ontologies described above instead value the ability to know and interact directly
 9 with the alive agencies of a world of multiplicitous selves, without prioritising systemic
 10 control over these agencies or a reduction of their diversity.

11 Sadly, we are living through a convulsion that threatens not only the biological richness
 12 of the species ~~that~~ are our companions here on earth, but also the cultural, linguistic, and
 13 ontological diversity through which these species have been known, encountered, utilised,
 14 and appreciated over millennia.³ Environmental anthropology has a critical and exciting role
 15 to play in generating understanding of the possibility for mutually nourishing relationships
 16 between cultural and biological diversity; and in fostering appreciation of the sophisticated
 17 and poetic as well as utilitarian ways through which people have cohabited with diverse
 18 natures globally. As both discipline and method, environmental anthropology can thus assist
 19 with the generation of discourses regarding ontology and epistemology that affirm practical
 20 ways through which human beings can live well with a prolific ecology of different kinds of
 21 beings. Animist ontologies in particular provide important gestures towards the generation
 22 of such positive narratives.

Acknowledgements

23
 24 I gratefully acknowledge support from the UK’s Arts and Humanities Research Council (ref.
 25 AH/K005871/2) for the project *Future Pasts* (www.futurepasts.net), which has permitted
 26 some of the field research on which this chapter is based.
 27
 28

Notes

- 29
 30
 31
 32 1 In this chapter I draw on work in various stages of publication, particularly Sullivan 2010, 2013a, ~~in~~
 33 ~~press~~; Sullivan and Low 2014; Hannis and Sullivan forthcoming.
 34 2 Other authors argue against the thesis that Descartes considered animals to be incapable of feeling, while
 35 affirming his insistence on animals as automata, possessing neither thought nor self-consciousness
 36 (Harrison 1992: 219–220).
 37 3 See UNESCO’s *Atlas of the World’s Languages in Danger*: www.unesco.org/languages-atlas/
 38

References

- 39
 40 Abram, D. 2010. *Becoming Animal: An Earthly Cosmology*. New York: Pantheon Books.
 41 Adger, W. N., Benjaminsen, T. A., Brown, K. and Svarstad, H. 2001. Advancing a political ecology of
 42 global environmental discourses. *Development and Change* 32(4): 681–715.
 43 Barker, P. 1991. *Regeneration*. London: Penguin Books.
 44 Behrens, K. G. 2014. An African relational environmentalism and moral considerability. *Environmental*
 45 *Ethics* 36(1): 63–82.
 46 Bennett, J. 2010. *Vibrant Matter: A Political Ecology of Things*. Durham, NC: Duke University Press.
 47 Biesele, M. 1993. *Women Like Meat: The Folklore and Foraging Ideology of the Kalahari Ju | ’hoan*. Johannesburg/
 48 Bloomington and Indianapolis: Wits University Press/Indiana University Press.
 Bird-David, N. 1992. Beyond ‘the original affluent society’: A culturalist reformulation. *Current*
Anthropology 33(1): 26–34.

What's ontology got to do with it?

- Bird-David, N. and Naveh, D. 2008. Relational epistemology, immediacy, and conservation: Or, what do the Nayaka try to conserve? *Journal for the Study of Religion, Nature and Culture* 2(1): 55–73.
- Bourdieu, P. 1992. *The Logic of Practice*. Cambridge, UK: Polity Press.
- Brightman, M., Grotti, V. E. and Ulturgasheva, O. 2013. Animism and invisible worlds: The place of non-humans in indigenous ontologies. In M. Brightman, V. E. Grotti and O. Ulturgasheva (eds) *Animism in Rainforest and Tundra: Personhood, Animals, Plants and Things in Contemporary Amazonia and Siberia*. Oxford: Berghahn Books, pp. 1–27.
- Bryant, R. L. and Bailey, S. 1997. *Third World Political Ecology*. London, Routledge.
- Callicott, J. B. 2013. Ecology and moral ontology. In D. Bergandi (ed.) *The Structural Links between Ecology, Evolution and Ethics: The Virtuous Epistemic Circle*. Boston Studies in the Philosophy of Science 296. New York: Springer, pp. 101–116.
- Castree, N. 2003. A post-environmental ethics? *Ethics, Place and Environment* 6(1): 3–12.
- Chakrabarty, D. 2000. *Provincialising Europe: Postcolonial Thought and Historical Difference*. Princeton, NJ: Princeton University Press.
- Clastres, P. 1988. *Society against the State: Essays in Political Anthropology*. Cambridge, MA: The MIT Press.
- Cohen, E. 1986. Law, folklore and animal lore. *Past and Present* 110(1): 6–37.
- Curry, P. 2016. From Enlightenment to enchantment: Changing the question. In R. Pellicer-Thomas, V. de Lucia and S. Sullivan (eds) *Contributions to Law, Philosophy and Ecology: Exploring Re-Embodiments*. Routledge Law, Justice and Ecology Series. London: GlassHouse Books, pp. 106–118.
- Descartes, R. 1968 [1637]. *Discourse on Method*. London: Penguin Books.
- Descola, P. 2013. *Beyond Nature and Culture*. Chicago, IL: University of Chicago Press.
- Evernden, N. 1985. *The Human Alien: Humankind and Environment*. Toronto, ON: University of Toronto Press.
- Fairhead, J. and Leach, M. 1996. *Misreading the African Landscape: Society and Ecology in a Forest–Savanna Mosaic*. Cambridge, UK: Cambridge University Press.
- Fletcher, R. 2013. How I learned to stop worrying and love the market: Virtualism, disavowal, and public secrecy in neoliberal environmental conservation. *Environment and Planning D: Society and Space* 31(5): 796–812.
- Flusser, V. 2011 [1987]. *Vampyreuthis infernalis*. New York: Atropos Press.
- Forsyth, T. 2003. *Critical Political Ecology: The Politics of Environmental Science*. London: Routledge.
- Foucault, M. 1980. *Power/knowledge: Selected Interviews and Other Writings, 1972–1977* (edited by C. Gordon). London: Harvester Wheatsheaf.
- Foucault, M. 1982. The subject and power. *Critical Enquiry* 8(4): 777–795.
- Franke, A. 2012. Animism: Notes on an exhibition. *E-flux* 36. Online. www.e-flux.com/journal/animism-notes-on-an-exhibition/ (accessed 2 January 2013).
- Freud, S. 2009 [1938]. Splitting of the ego in the process of defence. In T. Bokanowski and S. Lewkovitz (eds) *On Freud's 'Splitting of the Ego in the Process of Defence'*. London: Karnac Books, pp. 3–6.
- Garuba, H. 2012. On animism, modernity/colonialism, and the African order of knowledge: Provisional reflections. *E-flux* 36. Online. www.e-flux.com/journal/on-animism-modernitycolonialism-and-the-african-order-of-knowledge-provisional-reflections/ (accessed 23 February 2016).
- Geertz, C. 1973. *The Interpretation of Cultures*. London: Fontana Press.
- Gell, A. 1999. *The Art of Anthropology: Essays and Diagrams*. London: Bloomsbury.
- Glynos, J. 2012. The place of fantasy in a critical political economy: The case of market boundaries. *Cardozo Law Review* 33(6): 2373–2411.
- Gorenflo, L. J., Romaine, S., Mittermeier, R. A. and Walker-Painemilla, K. 2012. Co-occurrence of linguistic and biological diversity in biodiversity hotspots and high biodiversity wilderness areas. *Proceedings of the National Academy of Sciences of the United States of America* 109(21): 8032–8037.
- Gray, J. 2002. *Straw Dogs: Thoughts on Humans and Other Animals*. London: Granta Books.
- Guenther, M. 1999. *Tricksters and Trancers: Bushman Religion and Society*. Bloomington: Indiana University Press.
- Hall, M. 2011. *Plants as Persons: A Philosophical Botany*. New York: State University of New York Press.
- Hallowell, I. 1960. Ojibwa ontology, behavior and world view. In S. Diamond (ed.) *Culture in History: Essays in Honour of Paul Radin*. New York: Octagon Books, pp. 19–52.
- Hannis, M. and Sullivan, S. forthcoming. Relationality, reciprocity and flourishing in an African landscape. In L. Hartmann (ed.) *Flourishing: Comparative Religious Environmental Ethics*. Oxford: Oxford University Press.
- Haraway, D. 2008. *When Species Meet*. Minneapolis: University of Minnesota Press.

- 1 Harrison, P. 1992. Descartes on animals. *The Philosophical Quarterly* 42(169): 219–227.
- 2 Harvey, G. 2005. *Animism: Respecting the Living World*. London: Hurst and Co.
- 3 Herman, D. 2014. Narratology beyond the human. *Diagesis* 3(2): 131–143.
- 4 Holbraad, M., Pedersen, M. A. and Viveiros de Castro, E. 2014. The politics of ontology: Anthropological
5 positions. *Cultural Anthropology*. Online. www.culanth.org/fieldsights/462-the-politics-of-ontology-anthropological-positions (accessed 13 January 2014).
- 6 Homewood, K. and Rodgers, A. 1987. Pastoralism, conservation and the overgrazing controversy. In
7 D. Anderson and R. Grove (eds) *Conservation in Africa: People, Policies and Practice*. Cambridge,
8 UK: Cambridge University Press, pp. 111–128.
- 9 Hornborg, A. 2006. Animism, fetishism, and objectivism as strategies for knowing (or not knowing) the
10 world. *Ethnos: Journal of Anthropology* 71(1): 21–32.
- 11 Ingold, T. 2000. *The Perception of the Environment: Essays in Livelihood, Dwelling and Skill*. London:
12 Routledge.
- 13 Ingold, T. 2006. Rethinking the animate, re-animating thought. *Ethnos* 71(1): 9–20.
- 14 Jackson, M. 2013. Plastic islands and processual grounds: Ethics, ontology, and the matter of decay.
15 *Cultural Geographies* 20(2): 205–224.
- 16 Kelbessa, W. 2014. Can an African environmental ethics contribute to environmental policy in Africa?
17 *Environmental Ethics* 36(1): 31–61.
- 18 Kohn, E. 2013. *How Forests Think: Towards an Anthropology of Nature beyond the Human*. Berkeley:
19 University of California Press.
- 20 Leach, M. and Mearns, R. 1996. *The Lie of the Land: Challenging Received Wisdom on the African Environment*.
21 Oxford: James Currey.
- 22 Lewis, J. 2008. Maintaining abundance, not chasing scarcity: The real challenge for the 21st century.
23 *Radical Anthropology* 2: 11–18.
- 24 Lewis, J. 2015. Where goods are free but knowledge costs: Hunter-gatherer ritual economics in Western
25 Central Africa. *Hunter Gatherer Research* 1(1). doi:10.3828/hgr.2015.2
- 26 Low, C. 2008. *Khoisan Medicine in History and Practice*. Köln: Rüdiger Köppe Verlag.
- 27 Low, C. 2015. The role of the body in Kalahari San healing dances. *Hunter Gatherer Research* 1(1):
28 27–58.
- 29 Malinowski, B. 1922. *Argonauts of the Western Pacific*. London: Routledge and Kegan Paul.
- 30 Marder, M. 2013. *Plant-Thinking: A Philosophy of Vegetal Life*. New York: Columbia University Press.
- 31 Myers, N., Mittermeier, R. A., Mittermeier, C. G., da Fonseca, G. A. B. and Kent, J. 2000. Biodiversity
32 hotspots for conservation priorities. *Nature* 423(6772): 853–858.
- 33 Plumwood, V. 2006. *Feminism and the Mastery of Nature*. London: Routledge.
- 34 Reij, C., Scoones, I. and Toulmin, C. (eds) 1996. *Sustaining the Soil: Indigenous Soil and Water Conservation
35 in Africa*. London: Routledge.
- 36 Richards, P. 1985. *Indigenous Agricultural Revolution*. London: HarperCollins.
- 37 Robbins, P., Hintz, J. and Moore, S. A. 2010. *Environment and Society: A Critical Introduction*. Chichester,
38 UK: Wiley-Blackwell.
- 39 Sahlins, M. 1974. *Stone Age Economics*. Piscataway, NJ: Aldine Transaction.
- 40 Schmidt, S. 2014. Spirits: Some thoughts on ancient Damara folk belief. *Journal of the Namibian Scientific
41 Society* 62: 133–160.
- 42 Smith, H. 1981. Four cultures: The ontological turn. *Syracuse Scholar (1979–1991)* 2(1): Article 13. Online.
43 <http://surface.syr.edu/suscholar/vol2/iss1/13> (accessed 23 February 2016).
- 44 Solomon, A. 1997. The myth of ritual origins? Ethnography, mythology and interpretation of San rock
45 art. *South African Archaeological Bulletin* 52(165): 3–13
- 46 Stott, P. and Sullivan, S. (eds) 2000. *Political Ecology: Science, Myth and Power*. London: Edward Arnold.
- 47 Sullivan, S. 1999. Folk and formal, local and national: Damara cultural knowledge and community-based
48 conservation in southern Kunene, Namibia. *Cimbebasia* 15: 1–28.
- 49 Sullivan, S. 2000. Getting the science right, or introducing science in the first place? Local ‘facts’, global
50 discourse – ‘desertification’ in north-west Namibia. In P. Stott and S. Sullivan (eds) *Political Ecology:
51 Science, Myth and Power*. London: Edward Arnold, pp. 15–44.
- 52 Sullivan, S. 2010. ‘Ecosystem service commodities’ – a new imperial ecology? Implications for animist
53 immanent ecologies, with Deleuze and Guattari. *New Formations: A Journal of Culture/Theory/Politics* 69
54 (Special issue on Imperial Ecologies): 111–128.
- 55 Sullivan, S. 2013a. Nature on the move III: (Re)countenancing an animate nature. *New Proposals: Journal
56 of Marxism and Interdisciplinary Enquiry* 6(1–2): 50–71.

- Sullivan, S. 2013b. At the Edinburgh Forums on Natural Capital and Natural Commons: From disavowal to plutonomy, via 'natural capital'. 1
- Sullivan, S. [in press](#). (Re-)embodying which body? Philosophical, cross-cultural and personal reflections on corporeality. In R. Thomas-Pellicer, V. de Lucia and S. Sullivan (eds) *Contributions to Law, Philosophy and Ecology: Exploring Re-Embodiments*. Routledge Law, Justice and Ecology Series. London: GlassHouse Books, pp. 119–138. 2
- Sullivan, S. and Low, C. 2014. Shades of the rainbow serpent? A KhoeSān animal between myth and landscape in southern Africa – ethnographic contextualisations of rock art representations. *The Arts* 3(2) (Special Issue on World Rock Art): 215–244. 3
- Taussig, M. 1987. *Shamanism, Colonialism and the Wild Man: A Study in Terror and Healing*. Chicago, IL: University of Chicago Press. 4
- Tylor, E. 1913 [1871]. *Primitive Culture*. 2 Volumes. London: John Murray. 5
- Viveiros de Castro, E. 2004. Exchanging perspectives: The transformation of objects into subjects in Amerindian ontologies. *Common Knowledge* 10(3): 463–484. 6
- Whatmore, S. 2002. *Hybrid Geographies: Natures Cultures Spaces*. London: Sage. 7

Taylor & Francis
Not for distribution