

# Future Pasts

FUTURE PASTS WORKING PAPERS NO. 3

## What's ontology got to do with it?

Nature, knowledge and 'the green economy'

Sian Sullivan

April 2016

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Bath Spa University, School of Oriental & African Studies, University of Edinburgh

with Namibian partners:

The National Museum of Namibia, Gobabeb Research and Training Centre,  
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Published by **Future Pasts**

Working Paper Series  
Bath Spa University  
Newton Park, Newton St. Loe  
Bath BA2 9BN  
United Kingdom

[www.futurepasts.net](http://www.futurepasts.net)

[futurepastscontact@gmail.com](mailto:futurepastscontact@gmail.com)

ISBN: 978-1-911126-02-7

**Future Pasts** draws on Arts and Humanities research methodologies to document and analyse culturally-inflected perceptions and practices of sustainability. It has a particular geographical focus on west Namibia, where three of our core research team have long-term field research experience.

The project seeks to:

- enhance understanding of sociocultural, economic and environmental changes in historical and post-independence contexts;
- document and support cultural heritage and indigenous knowledge regarding present and historical cultural landscapes of west Namibia;
- extend analysis and understanding of the historical ecologies of the Namib;
- interrogate interpretations of ‘sustainability’, particularly those contributing to the promotion of a growth-oriented ‘green economy’;
- foster cross-cultural public discussion of concerns relating to environmental change and sustainability;
- critically engage with the power dimensions shaping whose pasts become transferred forwards to the future in contemporary approaches to environmental conservation and sustainability.

**Future Pasts** is funded primarily through a Major Research Grant from the UK's Arts and Humanities Research Council (AHRC award no. AH/K005871/2), under the Care for the Future Theme's highlight notice on 'environmental change and sustainability' (see <http://careforthefuture.exeter.ac.uk/>). Starting in October 2013, **Future Pasts** involves UK academics Sian Sullivan (Principal Investigator and Professor of Environment and Culture, Bath Spa University), Angela Impey (Co-Investigator and Senior Lecturer in Ethnomusicology, School of Oriental and African Studies, London), Rick Rohde (Co-Investigator and Research Fellow, Centre for African Studies, University of Edinburgh), Mike Hannis (Research Fellow, Environmental Ethics, Bath Spa University) and Chris Low (Research Fellow, Anthropology, Bath Spa University). Namibian partner organisations include the National Museum of Namibia, Gobabeb Research and Training Centre, Save the Rhino Trust and Mamokobo Film and Research.

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# What's ontology got to do with it? On nature and knowledge in a political ecology of the 'green economy'

Sian Sullivan<sup>1</sup>

**Abstract.** Contemporary market-based 'green economy' approaches to environmental degradation emphasise exchanges whereby quantified units of environmental harm are traded or 'offset' for compensating units of environmental health. Also encouraged is a view that economic growth can be 'greened' through 'decoupling' economic value from material ecological realities. Such approaches tend to frame biophysical natures in terms of aggregates, such as an 'aggregate natural capital rule' and 'net zero carbon'. Natures-beyond-the-human are thereby both understood and enacted as calculable, exchangeable, substitutable and commensurable between different spatial and temporal sites making up an 'aggregate' or 'net' value. This paper uses a comparative cross-cultural engagement to problematise ontological assumptions regarding the nature of nature underscoring the rationality of these aggregating and offsetting 'solutions'. Drawing on literatures from environmental anthropology and environmental ethics, combined with ethnographic material from long-term field research in north-west Namibia, the paper considers elements of alternative cultural ontologies and the ways these may give rise to a different array of practices with value for conceiving and generating 'sustainability'. It adheres to a critical political ecology perspective in understanding the ways that power structures the ontologies that become both privileged and occluded in neoliberal strategies for green economy governance. In doing so, the paper argues that sensitivity to the ontological politics through which spaces and entities become defined and known, and which thereby shape environmental conflicts, may be key to recognising and understanding with more depth the sometimes radically different 'natures' being struggled over in such conflicts.

**Key words.** ontology; green economy; offsetting; decoupling; sustainability; value; natures-beyond-the-human; neoliberalism; political ecology

## 1. An ethnographic opening<sup>2</sup>

When completing two years of doctoral field research in west Namibia in 1996 I started reading Marion Zimmer Bradley's 1983 novel *The Mists of Avalon* (Zimmer Bradley 1993(1983)). Centred on Glastonbury Tor, a striking hill that rises from the surrounding Somerset Levels in west England and visible from miles around, the book has become celebrated as a significant feminist retelling of the Arthurian legends. Glastonbury today is considered by New Agers to be the heart chakra of the planet (Bowman 2007: 309).<sup>3</sup> It is

<sup>1</sup> s.sullivan@bathspa.ac.uk

<sup>2</sup> This paper began life as a keynote paper given at a Norwegian Network for Political Ecology workshop, University of Oslo, December 2014 <http://www.ntnu.edu/political-ecology/political-ecologies-of-the-green-economy>. It is currently being revised for a special issue of the *Journal of Political Ecology* entitled 'Political Ecology, the Green Economy, and Alternative Sustainabilities' edited by Connor Cavanagh and Tor Ave Benjaminsen and based on papers from this workshop.

<sup>3</sup> Numerous websites and texts indicate this perceived reality. See, for example, <http://earthchakras.org/glastonbury.php>, accessed 29 October 2015.

perhaps best known now for the annual Glastonbury Festival that for 40 years has commemorated the summer solstice.<sup>4</sup>

In *The Mists of Avalon* two Glastonburys exist simultaneously. One is the Glastonbury of the establishment of the patriarchal Christian church, associated with the suppression and denigration of the old pagan cyclical ceremonies of fertility and renewal. To this day, a now ruined St. Michael chapel dating to the 15<sup>th</sup> century is positioned on the highest point of the Tor, constructed on the remains of church-associated buildings dating to several centuries earlier.<sup>5</sup> The second Glastonbury in *The Mists of Avalon* is the druidic Isle of Avalon, whose pagan sacred knowledge is held in particular by a matriarchal community living on the Tor. In the context of the growing Christian and patriarchal power in which the book is set, this older druidic community can only be seen and accessed with knowledge of the right words and protocols that open the mists surrounding the Tor. These mists otherwise act as a veil between the matriarchal and pagan epistemic community situated on the Tor, and the parallel patriarchal and Christian certainties with which this community is coming to be replaced.

I was reminded of this fable recently whilst experiencing the recording of oral histories with two elders in north-west Namibia. In this research I have been noting GPS coordinates and documenting childhood memories for places and histories that have been erased from official discourses regarding land where an array of now elderly people used to live. This work constitutes something of what Anna Tsing (2014: 13) describes as ‘historical retracing’: ‘walking the tracks of the past even in the present’ to draw out ‘the erasure of earlier histories in assessments of the present [thus] infilling the present with the traces of earlier interactions and events’. Such documentation can draw into the open occluded and alternative knowledges, practices and experiences that continue to ‘haunt’ the present despite their diminution through various historical processes (de Certeau 2010: 24; Tsing 2005: 81). For west Namibia, such diminutions have been associated with the governance and truth regimes effected by colonialism and apartheid. More recently, they have been structured through market-reliant approaches to the conservation of wildlife and ‘wilderness’ landscapes, involving access by global tourism markets and a programmatic national approach to Community-Based Natural Resources Management (CBNRM).<sup>6</sup>

The people I have been associating with in this context desire to be named in written material deriving from these interactions. In this specific case, they are Ruben Saunaeib Sanib, a formerly renowned hunter of a ||Khao-a Dama family grouping associated with the mountainous areas of west Namibia, and Sophia Obi |Awises, a ||Ubun lady whose lineage

<sup>4</sup> See <http://www.glastonburyfestivals.co.uk/>, last accessed 29 October 2015.

<sup>5</sup> See, for example, <http://www.nationaltrust.org.uk/glastonbury-tor/> last accessed 29 October 2015.

<sup>6</sup> On CBRNM in the study area see Sullivan (1999, 2002, 2003), Pellis (2011) and Pellis et al. (2015), as well as programme information at [http://www.nacso.org.na/what\\_is\\_cbnrm.php](http://www.nacso.org.na/what_is_cbnrm.php) (last accessed 3 February 2016). An overview of some of the structural circumstances shaping and being shaped by west Namibia is available in Sullivan *et al.* (2016). The theme of knowledges and experiences present as spectral traces that ‘haunt’ the present will be developed in a future working paper (Rohde and Sullivan, forthcoming).

split at an unknown time in the past from ≠Aonin/Topnaar Nama living in the Walvis Bay area of the !Kuiseb River to the south of this area.<sup>7</sup> Both Ruben and Sophia, amongst numerous others, grew up and lived in a broad land area cleared some decades ago of people living there. As detailed in Sullivan and Hannis (2016) these clearances were enacted for several reasons: to periodically clear a livestock-free zone north of the veterinary fence that dissects Namibia so as to control the movement of animals from communal areas in the north to settler commercial farming areas in the south (Miescher 2012); to make available relief grazing under Namibia's South African administration, which went mostly to Afrikaans livestock farmers in the 1950s (Kambatuku 1996); and, in the 1970s, to consolidate the area as a wildlife hunting, and then tourism, concession known as Palmwag – frequently described today as a ‘pristine wilderness’ (e.g. Felton 2011).



**Ruben Saunaeib Sanib and Sophia Obi |Awises.**

Source: Sian Sullivan, personal archive, Mai Go Ha (Save the Rhino Trust camp at Palmwag), 301014.<sup>8</sup>

Going into what is now the Palmwag Concession landscape with Ruben, Sophia and others in the course of a number of journeys throughout 2014 and 2015 has meant observing certain protocols, in particular around a practice called *tse-khom*<sup>9</sup>. This involves talking to the spirits of ancestors buried at numerous places throughout the Concession and beyond, as well as anonymous ‘spirits of the dead’ (Schmidt 2014a: 135) and sometimes a more broadly referenced ancestor-hero known as Haiseb. The latter is considered to have been a real person

<sup>7</sup> ||Khao-a and ||Ubun are identifying terms for interconnected and overlapping land and lineage groupings within the broader Khoe-speaking cultural designations of Dama(ra)/≠Nukhoen and Nama (see also Sullivan and Hannis 2016).

<sup>8</sup> All images used with permission.

<sup>9</sup> For consistency, I tend to be led by spellings used by Welhemina Suro Ganuses, with whom I have worked on transcriptions, translations and interpretations of ≠Nukhoen material since the mid-1990s. Detailed orthography is available in Haacke and Eiseb (1999, 2002).

who was associated with the doing of wonderful and clever things, who lived in the distant past and with whom large cairns found throughout the dryland environment from the Cape to the Kunene River are associated (also see Schmidt 2011, 2014a, 2014b). *Tse-khom* introduces travellers to the *kai khoen*, i.e. ‘big or old people’, whose presences now as ancestral agencies are requested to act so as to open the road in order that travellers can see the best way to go. They are asked to mediate the activities of potentially dangerous animals such as lions, who are viewed very much as other ensouled beings who assert their own agencies and intentionality, and for guidance regarding the most appropriate ways to do things. In *tse-khom*, the ancestors are souls whose ontological reality means they can assert various kinds of agency in the present, sometimes over other kinds of agency, such as that of animals. And I have to say that the more I travelled in the company of Ruben, Sophia and others, and the more we practised *tse-khom*, the more it indeed appeared as though our journey was being influenced by the agency of the ancestors (such agencies are discussed in more detail in Sullivan 2016a; Sullivan and Hannis 2016; Hannis and Sullivan forthcoming).

One manifestation of this ancestral influence occurred at a permanent spring called Kai-as, a former dwelling place mentioned in several oral histories recorded with people who now live on the periphery of the Palmwag concession<sup>10</sup> (see Figure 1). Kai-as is now deep in the Palmwag tourism concession area, but it is also a place where, possibly for generations, people planted gardens, herded livestock and hunted and gathered foods and other useful things. It was a place where groups of people dispersed throughout the broader landscape would meet in the rainy season, to socialise and to play their *arus* and *|gais*: their healing dances and their songs ‘sung for happiness’ that celebrate everyday experiences with various beyond-human others. When Ruben and Sophia talked about this time they spoke of it as ‘when their hearts were happy’. Returning to this place in the present was emotional, given the multiple losses their eviction had caused, not least the loss of being able to provide company for their ancestors, including a known ancestor in Ruben’s lineage who is buried at a noticeable grave at Kai-as.

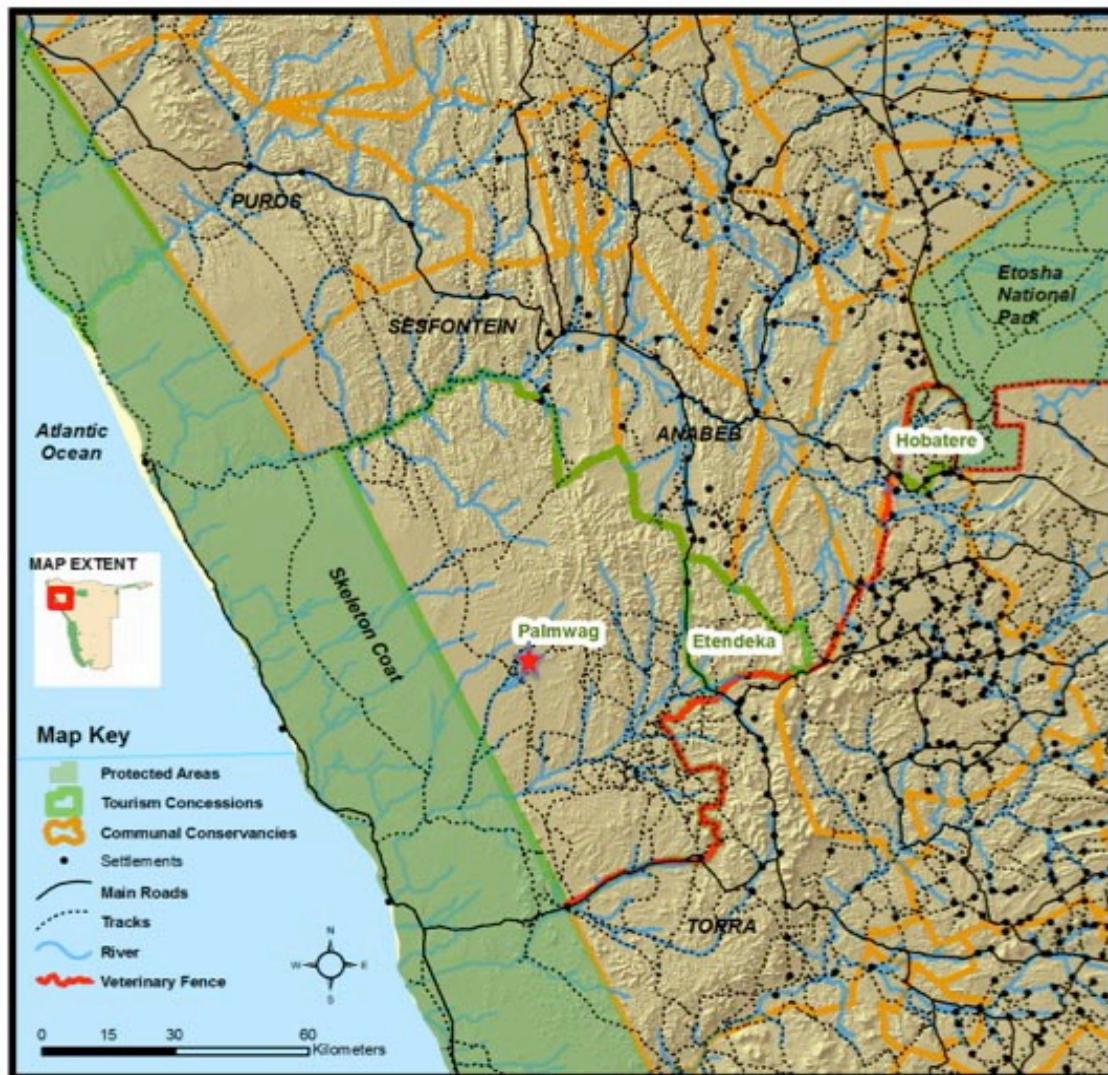
Indeed, on the occasion of this journey to Kai-as, an incident occurred regarding the grave of Ruben Sanib’s ancestor that drew to my mind the book *The Mists of Avalon* with which I open this paper. My longstanding companion in field research, a ||Khao-a Dama woman called Welhemina Suro Ganuses, was amazed to encounter this grave at Kai-as. She explained to me that she had travelled the track here several times previously from the opposite direction in the course of her normal work for the Namibian conservation NGO Save the Rhino Trust<sup>11</sup>. On these occasions the grave would be clearly visible right in front of the vehicle. But she had never before seen the grave. Disruption of prior livelihoods associated with this landscape has led to a lack of knowledge amongst younger generations of the detail of ancestral connections with places here. On her previous visits to the area Suro had thus not

<sup>10</sup> For example, in multiple interactions with Ruben Saunaeib Sanib, Sophia Obi |Awises and Michael Ganaseb in 2014 and 2015, in interview with Franz ||Hoëb (060414) and with Franz ||Hoëb and Noag Ganaseb in November 2015.

<sup>11</sup> <http://www.savetherhinotrust.org/>

known to do *tse-khom* at this place (although this is a practice with which she is familiar). For Suro, then, this absence of the practice of *tse-khom* explained why the ancestors had not previously elected to reveal themselves to her. As with knowing the right words to be able to open the mists to that other Avalon, for her what had enabled us to be able to see this grave on this journey was that we had been practicing *tse-khom* and talking well to the *kai khoen*.

**Figure 1.** Map of study area showing the boundaries of the Palmwag tourism concession, with the red star close to the centre of the map indicating the rough location of the former settlement of Kai-as.



Source: Map generated by Jeff Muntifering, 5 March 2016.

This incidence is amongst numerous stories and experiences confirming the agency of ancestors and their ability to intervene in the agency of other entities. Other nonhuman agency-enacting entities in this context include animals as ensouled beings that both see us and act in relation to this (cf. Kohn 2013), and the personified, supernatural force behind the phenomena of rain – known as *|nanus* – that asserts agency in selecting those humans who become healers (Sullivan and Hannis 2016). Indeed, the affirmation of agency and intentionality in multiple entities and selves beyond-the-human might be considered as key to

KhoeSan and other ‘animist’ perspectives on ‘reality’, through which agency, shaped by the diverse form, materiality and perceptual capacities of actors, is considered to be present everywhere, requiring constant attention and attunement in choices by humans (Harvey 2005; Descola 2013; Brightman et al., 2013; Kohn 2013; Sullivan 2010, 2013a; Sullivan and Low 2014). This perhaps distinguishes ‘animism’ from the vital materialism privileged in the ‘machinic assemblages’ of Deleuze and Guattari (1987(1980)), later reformulated as actor network theory (Latour 2007), and latterly expressed as an invigorated awareness of the organisational and ethical imperatives asserted by specific materialities (Bennett 2010; Hecht 2012; Jackson 2013). Animist perspectives instead emphasise the ethical perspectives and practices that may arise when people live and act as if other kinds of being can see and in some way represent ‘us’ (Kohn 2013: 1). In structuring understandings of the nature of being, this perspective assumes that all activity by agents who can be animals, components of weather, plants, spirit-beings, ancestors and so on, is simultaneously imbued with a moral, if relative and frequently ambiguous, dimension (Ingold 2000), requiring ongoing awareness, participation and adjustment in relation to the actions of all these others (Deleuze and Guattari 1987(1980): 258, 266-267).

Of course, we aspiring moderns, with our calculative rationality (Weber 2010(1930)) and our positivist modes of verification (Latour 2013) know that this cannot possibly be the case. Except that if there is one thing to be learned from the will to make the familiar strange and the exotic familiar – as encouraged by what might be considered the first principle of social anthropology (cf. Malinowski 1922) – it is this: that when people live *as if* something is real – through repeated and shared invocations, affirmations and practices – then this reality does indeed tend to *be(come)* real, not only in the realm of symbolic representation regarding the ‘reality’ shared by groups of people, but also more literally in the ways that the world is understood and encountered to be. As such there is perhaps a certain slippage between ‘folk and formal’ (Sullivan 1999) classificatory correspondences, as detailed in work by ethnobiologists such as Brent Berlin (Berlin 2014(1992)), and ontological phenomena that ‘overflow’, and thus cannot be ‘shoehorned’ into, these classificatory correspondences. It is these latter phenomena that might be said to constitute foundational differences in assumptions and experiences of the types of entities that can be said to exist so as to make up the nature of the reality that is experienced, participated in and ‘managed’. Or, as philosopher Rupert Read (2012: ix, also 20-22) writes, “‘Incommensurabilism’ is *not* tantamount to Relativism; it is rather about understanding the *depth* of the difference between the two cultures being compared’ so as to be able to take such differences seriously, instead of seeking to bring what is different into what is conceptually familiar (also see discussion in Blaser 2013). It is this invocation of differences in how ‘the real’ is understood to be, as well as the ethical shaping that this may effect, that makes ‘ontology’ relevant for political ecology understandings of the consolidations and impacts of particular environment and development policies.

In what follows I move next to a consideration of what I am understanding by the term

‘ontology’, followed by a section outlining some views on why ontology matters for political ecology conceptualisations of relationships with natures-beyond-the-human. I then engage with some ontological dimensions that both underscore, and are amplified by, contemporary green economy approaches for suturing economic growth with the management of urgent environmental crises, focusing on a constellation of ‘aggregate rules’, ‘offsetting’ and ‘no net loss’, and ‘decoupling’. I close with a brief conclusion affirming the relevance of ontological considerations for improved political ecology sensitivity to diversity in cultural understandings of the nature of being.

## 2. What’s ontology?

Ontology means literally the study of being, i.e. of what can be said to exist. It is ‘that branch of metaphysics dealing with the ultimate nature of reality’, that nonetheless is approached differently and concerned with different kinds of existents depending on ‘culture’ (Smith 1981: 1). Scholarly curiosity has long been piqued by the existence of plural ontologies, i.e. of diverse ways of framing and understanding the nature of reality, and of acting in relation to the assumptions that thus arise. Herodotus’ (1998(ca. 440 BCE)) *Histories* of the fifth century BCE – with its detailed discourses on the understandings and practices of diverse cultures encountered as he travelled through north Africa and the lands of the eastern Mediterranean – clarifies as much.

More recently the philosopher Wittgenstein in his later work (Johnson 2008, discussing Wittgenstein 2001(1953); also Read 2012, and pers. comm.) suggests that meaning regarding the nature of being is not fixed to a foundational and singular ontology, but instead arises, and is both confirmed and contested, through language games deployed through activities in multiple, overlapping and negotiated social contexts. As such, ‘a community’s’ values are intimately bound with the capacities the community has for talking about and framing the world’ (Johnson 2008: 14). Since ‘reality has no [necessary] compulsion to restrict itself to being in itself the kind of thing that we can describe’ (Johnson 2008: 14), this opens the way for the existence of multiple ontologies (i.e. ways of understanding and communicating the nature of being). Indeed, even the ‘hardest’ of sciences, namely physics, makes varied and contested postulates 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 100 years, and the current variety of views regarding underlying universal phenomena (particles, strings, plasma, etc.), illustrate this diversity. It was the existence of such shifting ontological incommensurabilities and transformations that formed the basis of Thomas Kuhn’s (1970(1962)) historical analysis of continuities and discontinuities in scientific knowledge-building. Around the same time, Foucault’s (1970) groundbreaking account of the variously stable and shifting conditions of truth in the life sciences similarly affirmed both situated stability and plurality in discourses and assumptions regarding the nature of existence. Foucault’s term *episteme* – describing the self-reinforcing

grid of assumed or *a priori* knowledge that infuses and permits sense-making to occur in all interactions flowing from and reinforcing an historical period or epoch – cannot help but also be imbricated with specific ontological dimensions (Sullivan 2006: 109).

In environmental anthropology and political ecology a move towards ontological considerations has intensified in recent years. Researchers have dug more deeply into divergences regarding the assumed nature of reality indicated by differences in how environmental phenomena are framed and thereby known culturally. Concentrating in the 1990s, detailed research in these domains demonstrated that a range of ‘received wisdoms’ regarding environmental phenomena, in response to which development policies were being designed, could be understood instead as knowledge constructions built discursively with significant power-effects in terms of access to land and ‘resources’ (for African contexts see, for example, Richards 1985; Homewood and Rodgers 1987; Benjaminsen 1993; Fairhead and Leach 1996; Leach and Mearns 1996; Sullivan 2000). These studies demonstrated that powerful national and international discourses regarding ‘the environment’, which tended to demote and even demonise the use and value practices of local people in the contexts researched, could be destabilised and deconstructed by bringing varied sources of data to bear on their key assertions. As such, these researchers assumed a *critical realist* approach to the acquisition of knowledge regarding the nature of environmental change(s) (Sullivan 2000; Forsyth 2001). They affirmed the existence of an environment ‘out there’ that can be known through empirical research methodologies; whilst simultaneously asserting that the deployment of methods and data to produce policy-relevant environmental knowledge also reflected the ‘regimes of truth’ shaping prominent views of the world and supporting associated powerful interests (cf. Foucault 1970, 1980, 1982). Amongst environmental anthropologists, geographers and political scientists alike, this Foucaultian-inspired orientation towards empirical understanding of the constructed nature of dominant environmental knowledges and discourses has been key to the emergence of the field of ‘political ecology’ (see, for example, Bryant and Bailey 1997; Stott and Sullivan 2000; Adger et al. 2001; Forsyth 2003; Robbins 2010).

Diversity in affirmed knowledges regarding environmental phenomena, coupled with varied perspectives on the social and political dimensions of the construction of these knowledges, mean that totalising signifiers such as ‘nature’, ‘the environment’, and ‘degradation’ of these categories denote things that ‘in [both] discourse and practice [are] socially made, not ontologically given’ (Castree 2003: 205). What can be added to this assertion, however, is that the different natures that are socially made in particular contexts are *also understood as having ontological or essential reality*; or, at least, that the specific natures of their form and existence is socially agreed upon (in these contexts). It is this diversely assumed and agreed upon ontological reality that makes entities knowable to their socio-culturally connected interlocutors; even if accompanying knowledges and certainties might also be ‘unpacked’, ‘deconstructed’ and ‘problematised’, i.e. shown to be socially, politically and historically particular, from different perspectives that are themselves also situated (Foucault 1970;

Chakrabarty 2000; Sullivan 2016b).

Ontological assumptions and praxis, then, 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), for participants in a grouping sharing and negotiating these assumptions. Knowledges and performative practices are thereby both based on, and recursively amplify, specific ontological ‘realities’, so as to affirm a ‘multiplicity of forms of existence enacted in concrete practices’ (Holbraad et al. 2014: online). In recent years, a consolidated ‘ontological turn’ in the social sciences and humanities more broadly (Smith 1981) has emphasised diversity in how cultures globally may know the nature of the natures they both utilise and with which they co-exist. Building on earlier work by anthropologists such as Hallowell (1960), a cross-cultural perspective increasingly affirms that cultural and historical differences create the possibility for *plural cultural ontologies* (Descola 2013), or ‘philosophies of being’ as Tsing (2014: 12) puts it. Acknowledging the possibility of plural ontologies permits productive engagements with diversity in ‘experiences and understandings of the nature of being itself’, even to the extent of proposing an ‘anthropology of ontology’ or ‘an ontology-centred anthropology’ (Scott 2013: 859, 868 and references therein).

Importantly, from anthropological as well as postcolonial perspectives, modern and post-Cartesian assumptions regarding how nature is constituted and can be known, whilst universalising, are understood to in fact be highly *particular* (Chakrabarty 2000). They are embedded in, and have been made possible by, particular cultural and historical contexts that do not necessarily translate well into diverse ‘nonmodern’ cultural experiences (Viveiros de Castro 2004; Descola 2013; Kohn 2013). As Mol (2002: 6, emphasis in original) writes ‘ontology is not given in the order of things, [...] instead, ontologies are brought into being, sustained and allowed to wither away in common, day-to-day, sociomaterial practices’. Ontologies are *made* through interactions between human and other-than-human agencies, as well as through shared and varied communications regarding these interactions and the dynamic and hybrid assemblages that thereby arise (Blaser 2013; Descola 2013; Sullivan and Hannis 2016). Ontology as a way of ‘worlding’ – i.e. ‘of enacting a reality’ (Blaser 2013: 23) – suggests the parallel existence of different discourses regarding how reality is constructed (ontology), how the world and its entities can be known (epistemology), and what constitutes appropriate and ethical praxes in relation to these entities (ethics). This triad might be seen as both significantly mutually-reinforcing for groups of people in specific temporal moments, whilst simultaneously inflected by the ambiguity, ambivalence, internal difference and ‘gaps’ that make possible creativity, contestation and change (Foucault 1970).

This perspective, however, is not uncontroversial. Graeber (2015: 31, drawing on critical realist philosopher Roy Bhaskar) maintains that it is more appropriate to privilege a ‘realist ontology’ accompanied by a ‘theoretical relativism’: thus celebrating ‘incommensurable theoretical perspectives on a reality that ... can never be entirely encompassed by any of them – for the very reason that it is real’. It remains difficult, however, to see exactly how this

differs from an embrace of plurality in the ways that people may understand the nature of how the world is constituted, and thereby demonstrate diversity in both meaning-making and actions in relation to this plurality of natures. Indeed, Graeber's strategy in itself cannot escape the necessity of naming and framing what a realist ontology might be based on, practices which themselves are socially-imbricated and thus inescapably particular in various ways (cf. Chakrabarty 2000). Graeber himself presents examples in his paper that rely on the existence of entities that different ontological regimes – as discourses concerning the nature of being – might simultaneously claim as facts and as impossibilities: *viz.* the existence of spirit beings, known as entities with 'their own autonomous agency, moods, whims, even personalities' in Malagasy truth regimes (Graeber 2015: 29), compared with the impossibility of their existence in universalising modern perspectives on the nature of being and how this can be known (Chakrabarty 2000). As such, Graeber seems to affirm that plural and culturally-inflected ontologies exist in the world – consolidated through practice, and associated dynamically with the (re)production of varied effects – whilst simultaneously diminishing the diversely emic meanings through which this plurality may be generated and affirmed<sup>12</sup>.

In this paper I (too) write from a view that 1. ontology as a formal mode of enquiry asks questions regarding the nature of being so as to make assertions regarding the nature of reality and how this can be legitimately known; but that 2. this does not necessarily lead to an assumption that a singular correct underlying ontology – the 'Real' that resists symbolisation, to invoke Lacan (see Fletcher 2013, 2014a) – may be ever better known through the right methods. For me, a critical realist perspective, i.e. one that assumes that a world exists independently of the observer, accepts that this world can be differently and diversely known. Further, this diversity arises from culturally- and historically-inflected negotiations and assumptions regarding the ways that the world is made so as to indeed affirm different ontological worlds (Sullivan 2000; Forsyth 2001). Political ecology reflects this endeavour to engage with the political construction of what is framed and known to be 'ecological' (Forsyth 2001). My desire here is to inflect this further still through drawing out some significances of how plurality in ontological perspectives shapes the sconatural 'reals' that are thereby known, privileged and politicised.

To sum up, at this point, it seems that 'we' have a range of acknowledged 'reals' here that are in tension with each other. These include:

1. the diverse 'reals' woven together through culturally-inflected invocations and embodied practices, based on ontological assumptions regarding the nature of reality and how this can be known, as well as corresponding assumptions regarding who 'we' are as agents acting in the world, as well as what entities might be included in the sphere of agency;
2. a hint of the Lacanian 'Real', commonly framed as the state of nature from which we have been forever severed by our entrance into language, but that may puncture the fantasies

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<sup>12</sup> On recourse to Cartesian-based truth claims in anthropology and a corresponding denial of alterity, also see Scott (2013: 863).

woven together through the human talent for complex symbolic representation in ways that prompt crisis, change and adjustment (as detailed in Fletcher 2013, 2014a);

3. and, to take this full circle, the existential nature of this underlying Real may itself also be the ontological object of culturally-inflected enquiry and assumption, i.e. ‘it’ may be understood and known differently, in diverse cultural as well as individual circumstances and moments (Sullivan 2016b).

I am perhaps better placed now to consider why ontology matters for political ecology understandings of relationships with natures-beyond-the-human, as well as to pursue considerations of ontological assumptions in neoliberal green economy environmental policy-making.

### 3. Why ontology matters for relationships with natures-beyond-the-human

Ontology matters because consolidated assumptions regarding the categories of being in the world shape action in the world, and thus have ethical, including ecoethical, effects (Sullivan 2013a). To quote Foucault in his 1982 essay ‘Why study power? The question of the subject’, we need to check both ‘the type of reality with which we are dealing’ *and* ‘the historical conditions which motivate our conceptualization’ of this type of reality – *if* we wish to both understand and to adjust the power-effects that are thereby amplified. This set of assertions make it possible to critique and/or affirm particular ‘types of reality’ for the power-effects they are perceived to amplify, without simultaneously asserting that any of these are ‘The Truth’ (also see Szerszynski 2007: 352).

Indeed, this is a core dimension of the field of ‘political ecology’: namely to critically analyse the making and structuring effects of environmental knowledges in the world, in the course of also understanding and intervening in perceived social and environmental justice issues (e.g. Sullivan 2000; Jarosz 2004). In embracing this normative dimension, for my part then I am interested in cultural ontologies that seem to me to also correspond with what I perceive to be ‘better’, i.e. more accommodating, ways of living with diverse kinds of being. ‘Better’, for me, means living in ways that encourage equitability and moral consideration both *between humans*, as well as *with* the different kinds of agencies that constitute other-than-human beings. This is a position that accepts that *difference makes a difference* (Kohn 2013, after Gregory Bateson), whilst at the same time acknowledging that we humans simultaneously exist in a continuum of connections and interactions with different-kinds-of-beings: from sharing DNA; to sharing capacities for biosemiotic communication through ‘nonsymbolic representational modalities [that] pervade the living world’ (Kohn 2013: 8; also Wheeler 2006); to sharing soul (as my Damara companions would affirm) (Sullivan and Hannis 2016); and to sharing a *telos* of embodied enthusiasm towards *flourishing* (Massumi 2014).

An ontological problem for Euro-American reality is that we find ourselves living in the shadow of two thousand years of hierarchical value-ordering in western thought which has affirmed that only humans, and often only some humans, possess intelligence and mind (see Table 1; also, discussed in Sullivan 2016a and b). At the other end of the hierarchy plants, for example, are viewed merely as ‘vegetables’: dispossessed of the capacities of movement, perception, communication, and immanently-directed *telos*, and thus usefully backgrounded as existing only for the instrumental ends of humans (as substantively critiqued in Hall 2011; Marder 2013; Head et al. 2015). In this hierarchical ontology only humans are worthy of moral considerability, since only we are ranked as possessing capacities such as communication, purpose and subjectivity.

**Table 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 <b>‘human excellence’</b>
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 <b>humans and animals</b> 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 <b>humans and animals</b>
		perceptive	able to sense pleasure and pain - found in <b>humans and animals</b>
		nutritive	mechanical ability to feed and reproduce. <b>plants</b> possess only this ‘soul’, i.e. otherwise rendered as passive

Source: based on Hall, M. *Plants as Persons: A Philosophical Botany*. New York: Suny Press, pp19-26; after Plumwood, V. *Feminism and the Mastery of Nature*. London: Routledge.

The ontological denial of these faculties in other kinds of being permits the doing of harm without recognition that harm is being done. Although perhaps it is more complex than this, in that denial tends to manifest more as *disavowal*: as the simultaneous acknowledgement of harms caused, accompanied by a strategy – an apparent solution – to seemingly mitigate this harm. I will return to this point later, but an example of this, and of the pathology that such ‘solutions’ can embody, comes from the post-Cartesian vivisectionists. Whilst operating in a Cartesian mode, i.e. construing animals as soulless automata (Descartes (1968(1637): 75-76), they would also cut the vocal cords of their experimental subjects so that they would not be able to hear their animal cries of pain (Evernden 1985: 16-17; Hornborg 2006: 24). Through

this apparent ‘solution’ these actors split their acknowledgment of the communicative and experiential capacities of animals from their denial of this possibility, so as to literally make the animals subject to their experiments into mute objects.

But the Platonic, Aristotelian and Cartesian ways of constructing orders of value and moral considerability in ‘the west’ are particular. They are not shared by many people living in the world today (see, for example, the contributions in the volumes edited by Descola and Pálsson (1996), Dransart (2013) and Green (2013)), and they have arisen historically as a rupture from prior ontologies that may have been more inclusive in terms of moral considerability (Cohen 1986). This is even as the necessity of doing harm to others in the course of living is recognised, through which others are knowingly transformed from communicative subjects into the objects of food and other usable things – just as nonhuman others such as lions, for example, might be perceived as similarly objectifying ‘us’, turning us into objects of prey (Kohn 2013). The suggestion here is that living in a radically expanded sphere of moral considerability – wherein nonhuman others are ontologically known as possessing different capacities for agency, the will to flourish, and the ability to also see and represent us (see, for example, Århem 1996) – acts as one social check amongst others against the disembedding from, and ruthless instrumentalisation of, natures-beyond-the-human that has been so defining of capitalist market economy (cf. Polanyi 2001(1944); Clastres 1990(1974)).

Locating agency in beings-beyond-the-human, then, might be one route towards bringing nonhuman others more clearly into presence as distinctive actors and interpretants alongside us in the rich, relational ‘ecology of selves’ we live with(in). Following Kohn, living as if the ways that other kinds-of-being represent, and communicate with, us matters, also beckons towards an opening up of the philosophical concept of *flourishing* so as to include different kinds of growing selves beyond-the-human as beings who also, in their own ways, are reaching for the good life (Hannis 2015). ‘Flourishing’ is a central concept in Haraway’s (2008) *When Species Meet* and Kohn’s (2013) *How Forests Think*. But it is also a privileged term in the philosophical domain of *virtue ethics* – the branch of philosophy connected with the ancient world that considers what it means, and what is required, to live ‘a good life’ (for a broader discussion of virtue ethics see Hannis (2016) and references therein). The vegetal, generative term flourishing (Marder 2013) is used increasingly as a translation of the Greek term *eudaimonia*, associated with the goddess of happiness and prosperity, and comprised of terms for ‘good’ combined with ‘spirit’ or ‘soul’. A life lived well and harmoniously was thus often framed in terms of ‘a good of the soul – not a material or bodily good such as wealth or political power’ (Cook 2013: 21).

As noted above, however, Cartesian ontology strips living creatures of the presence of soul, so as to make humans exceptional in these terms whilst creating pacified objects and automata of nonhuman others. This is a move that is both a way of knowing and of making the world, in the sense that animals and other entities that become conceived as soulless

objects are thereby also treated as such (see discussion in Baird Callicott 2013: 112). It is also a move that for my Damara companions in west Namibia – who embrace notions of soul and are versed in the realities of living with diverse nonhuman others, some of whom may eat people – consider derisory: as in, of *course* animals (from lions to harvester ants) are animated by the presence of soul (discussed further in Sullivan and Hannis 2016).

This leads me to two observations with which to close this section. The first, and whilst acknowledging the danger of idealisation here, is that I notice the following confluence of circumstances: that when people know other-kinds-of being as 1. animated with soul; 2. as communicative, albeit in biosemiotic registers that are different to the symbolic representation so defining of human (after Kohn 2013); and 3. as asserting distinctive, hybrid and lively capacities of agency and purpose that exceed their instrumentalisation for human economic ends, – there often seems to be an emplaced correspondence between these ways of knowing and the actual flourishing of environmental parameters, especially of ‘biodiversity’ (cf. Gorenflo et al. 2012). As Viveiros de Castro (2013: 35) writes for a different context, ‘the indigenous areas of the Amazon are the least deforested areas of the whole region’.

The second thing I notice is that groups of people desiring either to continue with these apparently ‘green’ ways of knowing and living, or to establish them within modern, industrialised contexts, seem to do so largely in a state of conscious antagonism, resistance and banishment *vis à vis* the strongly hierarchical and instrumental powers associated with the modern state and capitalised markets (cf. Foucault 2011: 186). A current example is the significantly reduced acknowledgement of indigenous concerns and rights from the adopted text of the Paris agreement arising from the 2015 United Nations Conference of Parties for the Framework Convention on Climate Change.<sup>13</sup> These then become struggles against what Foucault (1982) calls the laws of truth imposed on others who thereby become subject to someone else through control and dependence. ‘Green economy’ proposals and policies for neoliberal market exchanges to solve issues of global environmental degradation whilst maintaining economic growth, can be seen as a route through which such ‘control and dependence’ imposes ‘laws of truth’ on resistant human and nonhuman others, as considered in the next section.

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<sup>13</sup> As demonstrated in the various iterations of the agreement. The draft agreement on 5<sup>th</sup> December 2015 included the following square-bracketed (i.e. contested) wording for Article 2.2: ‘[This Agreement shall be implemented on the basis of equity and science, and in accordance with the principle of equity and common but differentiated responsibilities and respective capabilities, in the light of different national circumstances, and on the basis of respect for human rights and the promotion of gender equality [and the right of peoples under occupation].]’ ([http://indigenousrising.org/wp-content/uploads/2015/12/draft\\_paris\\_agreement\\_5dec15.pdf](http://indigenousrising.org/wp-content/uploads/2015/12/draft_paris_agreement_5dec15.pdf), accessed 16 December 2015). Article 2.2 in the final agreement of 12 December 2015 says instead: ‘This Agreement will be implemented to reflect equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances’

([http://unfccc.int/documentation/documents/advanced\\_search/items/6911.php?priref=600008831](http://unfccc.int/documentation/documents/advanced_search/items/6911.php?priref=600008831), accessed 16 December 2015). Indigenous peoples are dismayed and furious at the removal of language acknowledging their specific rights as ‘peoples under occupation’ (Lukacs 2015), which is how many such peoples are experiencing both the realities of fossil fuel exploration and extraction, and carbon accounting of forests so as to mitigate the products of such extraction. COP21 was thus accompanied by a number of protests and interventions by indigenous peoples.

## 4. Ontology and ‘the green economy’

The above section discusses how ontology denotes approaches to the nature of being, asserting that ontological assumptions are diverse, shaping how ‘the world’ can be known legitimately (epistemology), as well as the conception of appropriate actions in the world (ethics). In this section I consider some of the ontological assumptions infusing so-called green economy responses to accelerating anthropogenic alterations of ecosystems and the atmosphere (Steffen et al. 2015). The ‘green economy’ here refers in particular to an emphasis on the internalising of environmental externalities through pricing mechanisms, so as to approach problems of environmental degradation mostly as market failures that can be solved through market mechanisms (discussed further in Pawliczek and Sullivan 2011; Sullivan and Hannis 2015). Such proposals of necessity frame (Lakoff 2010), calculate and perform (Callon 2006) the so-called ‘natural environment’ as a formally economic entity or set of entities, ontologically flattening diverse natures into ‘frameworks of undifferentiated “orderings”’ yoked to global chains of commodity production’ (Joronen 2013: 631). This process is consolidating a metaphorical language of ‘ecosystem services’ and ‘natural capital’ in environmental management (discussed further in Sullivan 2009, 2013b, 2014 and references therein). Connected with this language is a rapid emergence of calculative technologies that rely on numerical presentations of nature aspects so as to support the marketised realities of offsetting, payments for ecosystem services and so on. I am of course bracketing out a much older ‘green economics’ tradition, that advocates strategies to re-embed, i.e. to ‘couple’, economic activity with emplaced ecologies (see, for example, Scott Cato 2012).

Here I focus on three key elements in the consolidating neoliberal ‘green economy’ ‘toolkit’ to consider their ontological assumptions and amplifications. These elements are: 1. orderings of entities at national and global scales in terms of ‘aggregate rules’; 2. the offsetting of calculated environmental elements considered to compose these aggregates as a key method for managing environmental harm and health; and 3. the valediction of a discourse of ‘decoupling’ economic growth from environmental parameters as both possible and necessary in order to create and sustain ‘green growth’.

### *1. Aggregate rules in generating a green economy*

Writing this paper in the immediate aftermath of United Nation’s Framework Convention on Climate Change 21<sup>st</sup> Conference of Parties (COP21) it is noticeable that notions of ‘zero-carbon’ and ‘net carbon neutrality’ are being reinforced as critical for climate change management (see review in Reyes 2015). These frames indicate a consolidation of aggregate thinking in the international environmental policy arena, to propose management around measurable aggregate levels that should be maintained. They thereby pave the way for substitutabilities between the materialities calculated as constituting this aggregate. In carbon management, this means that fossil fuels can continue to be burned since their emissions can be offset through the acquisition of carbon credits representing carbon gains stored elsewhere.

Such exchanges seem set to rely increasingly on assumptions and calculations of equivalence between industrial emissions and organically-stored carbon biomass, so as to achieve a ‘balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases’ (UNFCCC Paris Agreement 2015, Article 4.1). In principle if not in practice, an additional possible inference is of carbon equivalence between plantation forests and old-growth forests, leading to conversion of the latter into the former, as may occur, for example, through the expansion of biofuel plantations. In carbon offsetting of carbon atmospheric loading, calculations that enact different entities in terms of the element of carbon only are coupled with aggregate carbon budgets positing ontological equivalence between these entities on the basis of their carbon composition. Such calculative and ontological moves in turn permit the sustenance of carbon emissions, the accumulation of newly commodified and exchangeable carbon values, and thus an entrenching of a fossil fuel(ed) economy. In practice, these moves also often appear to be accompanied by the discounting of forest-inhabiting peoples with different views and ontologies regarding how their lands should best be managed (Cavanagh and Benjaminsen 2014; Dunlap and Fairhead 2014; Sullivan 2015).

Time will tell how the 2015 UNFCCC Paris Agreement plays out. Research on carbon markets to date, however, is ambiguous regarding the ability of such markets to do what proponents say they will, i.e. to reduce aggregate carbon levels through trading emissions in one place with the purchase of credits tied to carbon reductions and/or storage somewhere else (Lohmann 2009). A recent in-depth review of carbon credits awarded and traded under the Kyoto Protocol’s Joint Implementation (JI) mechanisms, for example, details how revenues from credits have created ‘perverse incentives to increase production or generation of waste gases as a means to increase credit revenues from waste gas abatement’ (Schneider and Kollmuss 2015: 1061). The authors argue that in this case a market in carbon credits under JI may have *increased* emissions by about 600 million tonnes. They also find that emissions reductions in many cases may have happened without the international carbon credit purchases with which they are ‘offset’, meaning that such trades do not meet their stated purpose of generating carbon emissions reductions that are additional to those that would have occurred anyway, i.e. in the absence of such trades. Of course, given the emphasis on competitive rent-seeking in neoliberal markets it is unsurprising that such perversities should arise. Markets in themselves cannot generate ethical or environmentalist choices and behaviour (cf. Sullivan 2010), and outcomes not predicted in the design of their incentive structures are arguably inevitable.

Moves to (re)frame ‘nature’ in terms of the new ‘nature-whole’ (cf. Asdal 2008) of ‘natural capital’ are encouraging similar aggregate models. The UK government’s Natural Capital Committee, led by economist Dieter Helm, advocates an ‘aggregate natural capital rule’ which states that it is maintenance of measured ‘natural capital’ in the aggregate that counts. A key intention of creating national natural capital accounts, as promoted, for example, by the World bank under its WAVES (Wealth Accounting and the Valuation of Ecosystem Services)

programme,<sup>14</sup> is thus to calculate stocks of nature-as-natural-capital (i.e. overall) in such a way as to support maintenance of measured elements above relevant thresholds, whilst permitting substitutability between the calculated values for different types of capital, as well as between different types of ‘natural capital’ (at the broadest level between ‘non-renewable’ and ‘renewable’ natural capitals). Conceiving of ‘nature’ in terms of ‘an aggregate natural capital rule’ thereby paves the way for losses and gains to be exchanged between different ‘capitals’, such that ‘no net loss’ allegedly occurs in aggregate (Helm 2014; Mace 2014).

Maier (2013: 34) frames such aggregating approaches as ‘based on neoclassical economics’ peculiar brand of market-framed, preference-based consequentialism’ (i.e. ends-oriented choices), highlighting their tendency to discount particularities by affirming substitutabilities between them. From an ecological perspective that considers the contexts in which current decision-making is taking place, an ‘aggregate natural capital rule’ seems additionally ‘peculiar’. We are already faced with path-dependent time-lags in ecological decline due to historical transformation of habitats globally; reductions in existing habitat are likely to induce reductions in species complement that are nonlinear, meaning that the full consequences of losses may not be factored into any offsetting calculations; and broader climate change make predictable restorations and creations of future habitat increasingly difficult to enact with any certainty. More challenging are the sheer complexities proffered by the diversities and dynamics embraced by a more processual and relational understanding of lives. Ecosystems themselves are chimerical, their ontology ‘shifting and elusive, driven by the vagaries of ecological inquiry’ to appear as ‘artifacts of the methods of the science investigating them, not robustly existing independent entities’ (Baird Callicott 2013: 106). Organisms, including the human body, do not exist as autonomous units, but as resolutely relational beings-becomings, comprised internally of interacting micro-organisms and dependent for existence on relationships with and ingestions of multiplicitous more-than-human others (Margulis 1998; Baird Callicott 2013: 107).

This intractable complexity notwithstanding, aggregate rules, such as those summarised above, suggest that destruction can occur for one ‘element’ of ‘natural capital’ as long as it is substituted or compensated for within the terms and frames set by the aggregate rule. In carbon accounting this approach supports the mitigation of industrial emissions through purchase of offset credits signalling sequestration somewhere else. In biodiversity management, aggregate rules are giving rise to biodiversity offsetting strategies that seem to offer a possibility of generating ‘no net loss’ of ‘biodiversity’, even though they exist by virtue of a measurable loss of individuals of species through development impact. Strategies of ‘offsetting’ and ‘no net loss’ are therefore considered in the next section.

## 2. ‘Offsetting’ and ‘no net loss’

The ‘aggregate natural capital rule’ and ‘net zero carbon neutrality’ consolidate an ontological frame that permits different units of nature in different places and times to be exchanged for

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<sup>14</sup> See <http://www.wavespartnership.org/en>.

each other, as long as some aggregate measure for a spatial and/or temporal scale of analysis apparently remains intact. Contemporary market-based ‘green economy’ approaches to the management of environmental degradation are thereby able to emphasise exchanges whereby quantified units of environmental harm such as carbon credits, species credits and biodiversity offset units are ‘offset’ for compensating units of environmental health at different places, as well as at projected future times.<sup>15</sup> Combined with aggregate rules and the aspiration of ‘no net loss’, offsetting principles and procedures act so as to do two key things: 1. they open possibilities for the technical establishment of equivalences and commensurabilities between entities that other ontological modes would retain as distinct; and 2. they have the effect of not addressing the identified cause of the problem in itself. The damage that is to be ‘solved’ through the offset is thus sustained rather than reduced or eliminated.

A number of authors (see, for example, the collection edited by Weintrobe 2013) have utilised the psychoanalytic concept of ‘disavowal’ to theorise offsetting as an approach to acknowledged loss that (seemingly) generates ‘no net loss’ in aggregate. I have found it useful to go back to Freud’s original 1938 essay on ‘disavowal’ entitled ‘Splitting of the Ego in the Process of Defence’. In this essay, Freud asserts that in order to accommodate traumatic and dangerous reality the ego may behave in remarkable – he says *artful* – ways. In short, a defensive splitting can be effected such that the threat associated with particular behaviours is both acknowledged and systematically turned away from. Attention instead is directed towards *fetishised solutions* that in fact facilitate continuation of the dangerous but *satisfying* behaviour. Freud uses the term ‘disavowal’ to describe this simultaneous and symptomatic defence against, and displaced acknowledgement, of traumatic reality (Freud 2009(1938)). Disavowal is embodied in the fetishised substitute (for example, the offset), on to which *value* has been displaced or transferred. From a Lacanian perspective, the offset itself would be considered symptomatic of acknowledgement of the Real of environmental crisis, dealt with through a fantastical and fetishised imaginary functioning ideologically to simultaneously disavow this ‘Real’ (Fletcher 2013).

In psychoanalytic terms such intensified splitting arguably engenders conditions ripe for psychosis – for a disavowal of reality that becomes both cynical and pathological. This, I think, is exactly what we see in offsetting as a strategy for solving environmental problems. Through this strategy, the proliferation of attention, activity and strategies for creating offsets and offsets markets seems at the same time to effect a reduced engagement with the causes of degradation underscoring the apparent need for offsets. The offset, and its chimerical promise of ‘no net loss’, or even ‘net gain’, deriving from loss (cf. Sullivan and Hannis 2015), has become the fetishised substitute for facing and reducing the cause of pathology. It is a defence erected socially and politically, perhaps so as to avoid facing the trauma of the broken socioecological systems that are the fallout of modern industrial effort, whilst permitting the simultaneous avoidance of behavioural choices that might act to reduce this trauma. The

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<sup>15</sup> For example, through the use of insurance to pay for the risk of a biodiversity offset not manifesting in the future in the way that it should in order to satisfy the conditions that would make it an offset (discussed in Sullivan 2013c: 86).

defence of the collective capitalist ego (if its possible to speak of such a thing) is thereby sustained precisely through deepening the rift between acknowledged danger and the substitute ‘solutions’ that mask this danger – a rift that is on a course for further deepening through discourses of ‘decoupling’, as considered below.

### *3. Decoupling*

Aggregate rules and offsetting as approaches towards conceptualising socio-environmental phenomena and solutions to environmental crisis without addressing the political economy causes of crisis are complemented by a third element, namely an intensified discourse of ‘decoupling’ (discussed in detail by Fletcher 2014b). Decoupling refers to the process of seemingly disconnecting economic activity and particularly growth from environmental impacts, so as to ‘dematerialise’ economic growth (UNEP 2011). The core impetus is to sustain economic activity, especially economic growth, whilst simultaneously reducing the throughput of material environmental resources that contributes to this growth. This is the magical formula that will generate ‘green growth’. As such, ‘decoupling’ moves in the opposite direction to ‘degrowth’ arguments (e.g. Kallis et al. 2012). ‘Degrowth’ positions also recognise that environmental impacts are related to economic productivity and consumption. They respond instead, however, by arguing for reductions in economic production and consumption, combined with mechanisms of wealth redistribution; so as to re-embed economic activity with ecological parameters, whilst also recognising the disproportionate impacts of high consumption practices associated with high-income wealth groups.

As with the discussion of offsetting and the goal of ‘no net loss’ above, Fletcher (2014b) analyses decoupling as a core fantasy of neoliberal environmental governance whose ‘purpose’ obfuscates the impossibility of succeeding in the reconciliation of ecological sustainability with long-term economic growth. This ‘impossibility’ notwithstanding, it remains interesting to consider what is going on with decoupling as an aspiration. Decoupling means to separate, disengage, or dissociate (something) from something else.<sup>16</sup> In this context of disengaging economic activity from ecological effects, an additional and very familiar separation – that of society from nature – is also affirmed. As such, decoupling can be seen to be a logical extension, as opposed to a dismantling, of the old Cartesian divide. It also deepens the disembedding of social lives from environmental contexts via the market economy noted by Polanyi (2001(1944)), and constitutes a perfect fit with the impetus towards environmental management by ‘remote control’ as cautioned by Guattari (2000(1989)). It would be harder to imagine a stronger counter move to a broader ‘green’ desire to (re)connect and (re)embed social relationships with the immanent materialities of other-than-human-natures.

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<sup>16</sup> The second google online definition that appeared when I looked up ‘decoupling’ states that to decouple also means to ‘muffle the sound or shock of (a nuclear explosion) by causing it to take place in an underground cavity’. This should perhaps give cause for thought regarding what exactly the discourse of ‘decoupling’ in environmental management may be concealing.

These aspirations – conceptualising specific environmental parameters in aggregates, offsetting losses with gains of environmental elements composing these aggregates, and decoupling socio-economic activity from environmental materiality – are based on a disconnected and disembedded ontology that seems remarkable for its sheer distancing from the diversely immanent and embodied natures with which we live. All these strategies require technical renderings (cf. Murray Li 2007) of natures-beyond-the human into the categories and units that shore-up the monetary value regime and mode of rationality permitting neoclassical market economics to make sense. As well as being the expert and technical means via which other rationalities and ways of knowing are thereby sublimated, calculative rationality and monetised accounting practices act ontologically to structure in advance how it is possible to know natures-beyond-the-human. In doing so, other onto-epistemological possibilities for ‘knowing nature’ and conceptualising socioenvironmental issues are foreclosed (cf. Feyerabend 1999; Sullivan 2010, 2013a; Moreno et al. 2015; Nightingale 2016).

This tendency is connected to the situation we appear to find ourselves in, in which nothing is more valuable than money. What I mean by this is that apparently nothing can be valued, and no behaviours can be adjusted, if these are outside the quantifiable monetary sphere. As economists are keen to tell us, if something is without a price then it has zero-value (cf. Helm 2015). But this seems equivalent to saying that life, if it cannot be priced, merely exists as an externality to market economy (or, from a Marxist perspective, from the labour theory of value). This surely cannot be right.

From an ethical perspective, calculating and accounting for all nature aspects in terms of quantified monetary forms of value, whether this is metaphorical or through constructions of nature as commoditised units and entities, seems disastrous. This is because such calculations place ‘nature’ into a value sphere – the sphere of money – whose entities are both endlessly exchangeable and beyond moral considerability. We can talk about harming other selves, whether these are other human or beyond-human selves, and we can have an expanded conception of the ecology of selves that might thus be harmed. But it would be strange indeed to talk about harming money. When we hook the category nature to the category capital we once more seem to loosen the possibility of relating with diverse other-than-human entities as communicative, flourishing beings who suffer as a result of being harmed.

## 5. Truth/knowledge/power – and ontology – in political ecology

Which brings me back to ontology. The elements of neoliberal green economy structuring considered above approach the diverse ecology of selves present with us here on earth through a series of totalities that flatten diversity, and thus act to entrench the distance between ‘us’ and the ‘its’ of nature. These totalities include the ontological categories of

‘nature’ and ironically of ‘biodiversity’, and increasingly of ‘natural capital’, ‘ecosystem services’ and ‘carbon’. Once in place, these totalisations denote and determine the technical and epistemological procedures by which their constituents can be known in advance.<sup>17</sup> And so the individual and connected lives in a locality become abstracted and calculated as biodiversity offset units; and the entities constituting an old-growth tropical forest – some of which may be hundreds of years old and thus have ‘witnessed’ far more history than we have – become known as exchangeable particles of carbon. These renderings are making it harder than ever for ‘us’ to be in multifaceted relationships – including those imbued with wonder (Scott 2013) – with the distinctive and particular lives comprising nonhuman nature; at a time when perhaps a reconsideration of the nature of human relationships with the diverse entities we share life with is most urgently needed. As Joronen (2013: 635, 633) writes, this particular ‘ontological mono-politics of calculative enframing’ ‘turns the world into a calculated picture denying what remains most essential for the earth: its openness for unpredictable emergence’. In particular, the abstracting and calculative onto-epistemology of modern environmental accounting rigidifies the veil between ‘us’ and ‘nature’: an act depicted so well by William Blake in his 1795 iconic image of an abstracting, scientific Isaac Newton turning his back on the immanent and animate complexity of the natures from which his abstractions derived.<sup>18</sup>



**‘Newton’ by William Blake (1795).**

Source: [https://commons.wikimedia.org/wiki/Category:Newton\\_%28Blake%29#/media/File:Newton-WilliamBlake.jpg](https://commons.wikimedia.org/wiki/Category:Newton_%28Blake%29#/media/File:Newton-WilliamBlake.jpg), photographic reproduction of a two-dimensional, public domain work of art housed in the Tate Gallery, London, UK.

<sup>17</sup> I thus do not concur with Zizek (2011: 291) who argues that ‘[t]hat very [universalising] force of abstraction which dissolves organic lifeworlds is simultaneously the resource of emancipatory politics’.

<sup>18</sup> See <http://www.tate.org.uk/art/artworks/blake-newton-n05058> (last accessed 16 December 2015).

Inspired by a Foucaultian approach toward subjugated knowledges, the situatedness of truth claims, and the always-present emancipatory possibility of change, political ecology has been powerful in exposing the workings of techno-managerial environmental discourses and the roles these play in the making of environmental subjects, as well as in the liberations and resistances contesting this disciplining. The explicit intention to work at the political and politicised edges of environmental thought in and of itself speaks of sensitivity to the situatedness of truth-claims regarding environmental phenomena – the understanding that the traction of such claims in society is related to historically-embedded institutions, associated techniques of power and the incidence of resistance. What I have tried to draw out in this paper is that differences in environmental knowledges relate also to ontology: to discourses regarding how the world is constituted, which create variety in the nature of being and how this can be both known and encountered. As Blaser (2013) articulates, environmental conflicts – the heart of political ecology – are ‘politicococonceptual problems’, as much as they are struggles over land and ‘natural resources’ as property, and over discourses regarding how these properties should best be managed for economic and ecological ends. Importantly, a sensitivity to the ontological politics through which spaces and entities are defined and known, and which thereby shape environmental conflicts, may be key to recognising and understanding with more depth the radically different ‘natures’ being struggled over in such conflicts (Escobar 2008; Blaser 2013; Joronen 2013; Martin et al. 2013).

Foucault (2011(1983-84)) in his later work wrote of the courage required so as to speak one’s truth truthfully, knowing there may be a risk associated with doing this. The Greeks of classical times called this speaking of one’s truth *parrhēsia*, in contradistinction to the manipulations of one’s audience valued in rhetorical skill. Approaching and knowing the world differently to the empowered and instrumental order of things is risky and delicate business, as those resisting the frequently militarised advance of capitalist value orderings have always known. Political ecology has a great deal of work to do to both bear witness to, and intervene in, this risky and sometimes dangerous business. Opening to ontological variety in the known natures of the world is a further route through which political ecologists might sharpen our sensitivities to the existence of multiple ecological ‘truths’; so as to better illuminate the present political dimensions associated with the ‘modern reason’ that both elevates and subjugates particular ontological dimensions of existence.

## Acknowledgements

I gratefully acknowledge communications with numerous people whilst conducting field research in west Namibia in the course of writing this paper, as well as funding from the UK’s Arts and Humanities Research Council (AH/K005871/2, [www.futurepasts.net](http://www.futurepasts.net)) and the Leverhulme Trust (RP2012-V-041, <http://thestudyofvalue.org>). Invaluable translation and logistical support was provided in Namibia by Simson !Uri-||khob, Welhemina Suro Ganuses, Filemon |Nuab, Ezegiel |Awarab, Elfriede Gaeses, Andrew Botelle, Eugène Marais and Jeff Muntifering, for which many thanks. Mike Hannis and Rob Fletcher kindly read and commented on earlier versions of the paper – your generosity and provocations have been greatly appreciated.

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