Jackson, M. (2018). Nature, critique, ontology, and some decolonial options: problematizing 'the political'. In T. Marsden (Ed.), *SAGE Handbook of Nature: Three Volume Set* (3rd ed., pp. 235-266). SAGE Publications Ltd. <https://doi.org/10.4135/9781473983007.n14>

Peer reviewed version

Link to published version (if available):
[10.4135/9781473983007.n14](https://doi.org/10.4135/9781473983007.n14)

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Nature, critique, ontology and decolonial options: problematizing 'the political'

(forthcoming in: *The SAGE Handbook of Nature*, ed. T. Marsden)

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Where do you begin telling someone their world is not the only one?

—Lee Maracle, *Ravensong*

Introduction

This chapter explores the implications for politics and the space of 'the political' in light of recent ontological approaches to nature and the environment. My intention is to parse out broadly how and why significant changes to how we think about politics and the meaning of critique arise in recent efforts to re-centre 'the political' via ontological debates. I do this by explaining how the space of the political emerges from a genealogy of political critique as it develops in relation both to nature and the idea of a critical, human subject. Critique and subjectivity are stories generated in the production of nature as a concept, and in the corollary separation of human 'culture' from so-called 'natural' matter. The chapter argues that, although it is problematizing and no easy answers ensue, re-thinking an approach to 'the political' is necessary if we are also to accept premises within new ecological ontologies of thought and nature.

The chapter also explores the fact that developments within new material and relational orientations to the question of nature and human political possibility are not peculiar to ontological discourses alone. What are often understood to be recent ontological emphases actually mirror much earlier, conceptually similar claims made by many indigenous, pre-colonial, post-colonial, and decolonising analyses (ex. Huehls, 2016; Mignolo, 2011; Todd, 2016). As we shall see, an appeal to ontology emphasised here widens and re-orientates the scope of what is meant by nature, and, in doing so, foregrounds decolonising requirements regarding how we might think about nature and humanity differently. The assertion is that, in addition to numerous arguments in biology and medicine, political ecology, posthumanist, and feminist studies, and crucially, as indigenous and decolonial/postcolonial studies *also* suggest, it is increasingly necessary to address how ontological and relational premises shape anew what is variously meant by 'the political' (ex. Burrows, 2010; Chakrabarty, 2009, 2011; Escobar, 2011; Graham, 2008; Jackson, 2014; Kohn, 2013; Latour, 2004; Povinelli, 2011; Sundberg, 2014; Tsing, 2015; Watts, 2013).

At one time in the very recent past, the critical mantra of progressive politics was overwhelmingly to 'de-naturalise' truth claims. Today, in light of efforts to build ontological and decolonising re-descriptions of the social and geographical worlds that constitute thought, human agency, and collective possibility, critical politics are being asked to re-orient themselves, sometimes in quite radical ways. In some senses, the political is being asked, quite controversially, to 're-naturalise' itself (ex. Cornell and Seely, 2016; Sharp, 2011). Such re-orientations demand that we mobilise quite different imaginaries about what constitutes human agency, the grounds of social relation, and, subsequently, how the scope and space of the 'the political' is conceived and negotiated via a re-consideration of nature. The following contribution seeks, therefore, to examine three inter-related questions. First, why does rethinking a foundational concept like nature raises controversial, but necessary, questions for politics? Second, how do we need to reimagine the relational spaces of the human in order to enact anew our political animality (*quu?as* in Nuuchahnulth or *zoon politikon* in Greek)¹? And, third, how does the meaning and work of critique *itself* change in addressing such questions?

The chapter proceeds in three commensurate steps. First, it sets out, in broad terms, the context for the current shift to ontologically inflected examinations of nature as a question for thought. It does so by focusing on the phenomenologically framed de-naturalising criticism. Then it turns to the post-phenomenological challenge, which, in light of a different approach to the question of nature, aims to re-think political conventions like the subject or critique. Before introducing simple

¹ Western political theory has long been familiar with Aristotle's invocation of *zoon politikon*, the human as a uniquely political animal. I seek to do two things by translating alongside Aristotle's *zoon politikon*, a cognate Nuuchahnulth word for human relational responsibility, '*quu?as*' (see Atleo, 2011). First, I am simply noting that there are other ways to imagine the human than through Greek. Nuuchahnulth is the language spoken by several groups of people on the far west coast of Canada's Vancouver Island. One could choose numerous other similarly silenced languages and ways of understanding. Second, seeking out these otherwise political imaginaries can also reveal different ways of living within ecologies of life – 'natures' – that make human relations possible, something inherent to the meaning of *quu?as*.

ontological and decolonising illustrations that problematize a modernity's politics of nature-culture separations, it is important to appreciate the link between how we conceptualise, in a modern Western tradition, the work of critique and its associated notion of the self-reflective subject. Such critical orientations originate for Euro-modernity in the eighteenth century, in particular, from the work of Immanuel Kant.

Kant is *the* key figure for defining modernity's problematic of critique. Critique's metaphysical landscape has subsequently shaped how 'the political' is assumed and framed, whether under individualist political theories or under social and historical materialist political theories. My focus on Kant's legacy for shaping how critique is mobilised for nature and politics is deliberate, because, when critical politics is invoked today, it is often invoked *without* due consideration to the deeply colonial, Euro-centric, and humanist metaphysics that shape what is assumed to be critical thought and its epistemological problematics (see Dabashi, 2015). This metaphysics emerges from Kant's 'Copernican Turn' to human phenomenal experience as the limit and epistemic ground of critique. Understanding the legacy of these assumed metaphysics in articulating 'the political' and the meaning and implications of a re-thought 'nature' is important if we are also to overcome them, as I argue we must.

The chapter then applies ontological and decolonising illustrations that embody how we might begin to think about overcoming limiting political descriptions of nature to forward politics of enactment and commitment. I argue that the present appeal for a political ontology does not play into a politics of recognition or inclusion. Ontological appeals are not about being included within existing definitions of what counts as political. Such refusals may be one reason for contemporary worries about ontology being, allegedly, 'apolitical' or 'uncritical' (see ex. Bessire and Bond, 2014; Gilroy, 2015). Ontological and decolonial appeals are not apolitical, as their decolonial implications make plain. Instead, political ontology simply aims to situate our always already in-play responsibilities to others (i.e. what we think of as the nub of ethics and politics) within the multiple, living materialities – and that means *possibilities* – of being embodied and being alive. In doing so, they demand that we recognise the following: social struggles that stand against forms of exploitation and alienation, that seek to think and live worlds differently, 'cannot be adequately understood through the same rationalities that underlie the processes...they are breaking with' (Icaza and Vázquez, 2013: 683). Instead, we should aim not to reproduce the Euro-centric and patriarchal exclusions that shape what is often meant by 'critical' and 'political' today. Following in the footsteps of more knowledgeable, adventurous, and wiser voices (ex. Simpson, 2011: 149, see also, Glowczewski, 2011: 13; Henry, 2011), I'm therefore asking us to think of *doing thinking* as a dance. Let's perform new worlds, rather than simply order our assumed one world into an ever more constrained form. The latter effort, after all, seems *radically* not to be working for everyone, and, in the long run, anyone.

Part I: Epistemological Productions and Critical Constructions

Explanatory frameworks emphasizing materialist ontologies, dispersing ecological assemblages, and the falsity of nature-culture binaries have been around for some time in the Amer-European academy. Kindred ideas have, as I'm also emphasising, been around for much, much longer outside this colonising space of epistemic privilege which mobilises the term 'ontology' (ex. Mignolo, 1993; 2011). Today though, ontological emphases are increasingly influential in a range of social sciences and humanities disciplines, from anthropology and human geography, to environmental and socio-legal studies, and their many inter-disciplinary intersections. Some term this recent concentration of emphases an 'ontological turn' (ex. Bessire and Bond, 2014; Escobar, 2007; Sahlins, 2013). Yet, while the on-going transdisciplinary trend is producing a bewildering array of fascinating research focused through diverse object oriented and process lenses – from viruses, elephants, forests, and mushrooms, to air conditioning, bio-art and 3D printing, and everything imaginable in-between – the shifts in critical political thinking that accompany ontological approaches to

human/environmental interactions sit less comfortably (ex. Badiou, 2008; Bessire and Bond, 2014; Castree 2014; Gilroy, 2015; Swyngedouw, 2013; White *et al*, 2016). That is because ontological emphases beg serious questions of taken for granted critical and political concepts. Profound changes to key political assumptions like human agency, intentionality, subjectivity, and even critique, accompany evolving ontological and relational re-orientations to the question of nature. The space and meaning of 'the political' shifts as a consequence. That such shifts are embraced by orthodox critical and activist scholarships is another matter.

The expansion of the fields within which the human emerges as a problem for thought occurs in response to de-naturalising constructionist and historical materialist theories, which is why some authors have termed recent ontological shifts as 'postconstructivism' (ex. Escobar, 2010). Dynamisms that make up the focus of postconstructivist analysis are very often understood to be enrolled within non-human or more-than-human relationships, and often seek to pluralise socio-ecological understanding. In doing so, they decentre both the human and, indeed, the assumed common world as the social and political locus of critical thought. Incommensurable 'pluriverses' replace a politics of the universal commons (ex. Blaser, 2010; de la Cadena, 2010; Escobar, 2011). Within this re-orientation, the 'socius' – the unit of meaningful social relationships produced for critical focus within discourse – is read not as situationally fixed or epistemically limited, but as open, heterogeneous, experimental, and changing. Fundamental is the incorporation of more-than-human agencies. All material convergences oriented to becoming, organic and inorganic, are deemed 'societies' (ex. Whitehead, 1920; Roberts, 2014). Within such claims for multi-verses and more-than-human sociality, one can easily anticipate how orthodox political understanding is challenged.

A conjunction of diverse but overlapping discourses and planetary events accounts for this broad shift in critical focus to social ontologies. Explanatory narratives like STS, Nature-Cultures, performativity, complexity theory, materiality, affect, speculative realism, object oriented ontology, processualism, more-than-human and animal studies, and cosmopolitical claims, to name a few, are increasingly writ large amidst wider academic and societal concerns regarding climate change, biodiversity loss, the Anthropocene, over-accumulation, habitat destruction, resource inequalities, and the vexed politics of sustainability, resilience, futurity, and adaptation. Put simply, the political problematic of how to live otherwise within pressing contemporary contexts of planetary crisis is, in large part today, a political problematic of 'socio-ecological entanglement' (White *et al*, 2016: 14).

The list of influential authors engaged in this empirical and conceptual 'en-ravelling' is long and varied.² It is beyond the scope of the present chapter to detail their complex relations and inevitable disagreements, but the approaches these authors explore come about through a rigorous attention to the material and historical conditions of experiential understanding. What distinguishes their relatively newer approaches is less the worry about reflexively navigating the conditions of the knowable as an epistemological or textual limit. More concerning is, first, the need to account for the material complexities and dynamisms of post-human agency. In other words, what amounts in the empirical scope of the human is greatly expanded by the recognition we are not separate from nature. Second, is the desire to explore the potentials ontology and thinking otherwise poses for becoming politically and socially responsive – for creating possible worlds. It bears repeating that, while Euro-modern perspectives are increasingly awakening to the critical implications of not constructing ourselves as separate from nature, indigenous worldviews have, of course, been arguing the same long before first contact. It is the reason they were labelled by modern discourses as 'indigenous' in the first place.

² A few of the more influential names include: Gilles Deleuze, Felix Guattari, Isabel Stengers, Bruno Latour, Donna Haraway, Tim Ingold, Gregory Bateson, Michel Serres, Karen Barad, Jane Bennett, Michel Callon, John Law, Anne-Marie Mol, Brian Massumi, Arturo Escobar, Marilyn Strathern, Timothy Morton, Roy Wagner, Philippe Descola, Eduardo Vivieros de Castro, Elizabeth Povinelli; but, there are many, many, more.

Unfortunately, indigenous theory and practices continue to be largely ignored, even by many of those aligning their thought within the ontological turn (Todd, 2016).

Humans *are*, fundamentally and inextricably, within what some of us have learned to call 'nature': that stuff of process and relation that makes life, thought, and futurity possible. Whether we, Amer-Euro-modern critics, are coming around, again, or too late to this understanding is an interesting question. But, the broad claim from the numerous ontological orientations invoked here is that, if it is possible to effect a profound shift in thinking and practice to recognise socio-ecological entanglement as a function of the sustaining and enabling grounds for life, then ethically, politically, and epistemologically we might be better placed to address the current complexities of individual and collective action. As such, we may also be better able to appreciate and enact modes of living otherwise than continue the destructive ways and means posed by modernity's ongoing colonialisms, capitalist over-accumulation, industrialisation, inequality, uneven development, and technological hubris.

Rich and fascinating onto-stories about worlds abound, yet the political and ethical implications ushered in by these ontological and relational turns struggle to keep pace with descriptive enthusiasm. Reasonable worries about human distinctiveness persist. Where and how do we draw the line around what is human and what isn't? Do we need to, or *can we even*, draw such lines given accounts that seek to dissolve human agency within wider social and material assemblages? Do we extend political agency to non-humans? What would that mean or look like? More fundamentally, how do we account for difference, contingency, and heterogeneity when the explanatory focus is on material intra-dependence? Why, indeed, is ontology a problem for politics?

In order to address these questions, we first have to examine how critique and its politics has emerged with respect to the idea of nature. It is to this genealogy that the chapter now turns.

Realism and Constructivism

Until recently, critical social science and humanities scholarship about nature and the environment concerned itself, predominantly, and very broadly speaking, with one of two general approaches. Either, on the one hand, it entertained an explanatory agenda that sought to affirm, in the form of claims about natural facts, knowledge about a shared common world and universe of things separate from human beings. Or, on the other hand, it sought to expose how the seemingly transparent production of a common world of natural facts was instead rendered 'natural' by social and ideological conditions that *falsely* claimed legitimacy because such facts were, ostensibly, pre-social and therefore unquestionable. The former approach sometimes went under the label of positivism, or, later and more sophisticatedly, 'critical realism' (ex. Archer *et al.* 1998). The latter approach is widely referred to as 'critical constructivist' or 'social constructivism' (ex. Castree, 1995; 2014; Demeritt, 2001, 2002; Soper, 1995). The importance of each approach in this chapter centres not simply around claims about nature as such, although that is not insignificant. What is important for thinking about 'the political' lies rather in the common ground that each derives from the view that a coherent subject makes claims about a world from which she is experientially separated. Both critical realisms *and* critical constructivisms reinforce strong dualist readings of nature-society relationships. Indeed, their reflexive capacity to be critical revolves precisely around the supposed separation of a posited nature (object) from a posited culture (subject). Each is now briefly explained in turn.

Traditional realist accounts of the natural world, either positivist or critical realist, seek to uncover rather than interpret the causal, determining potencies of phenomena. Causal forces are captured and explained by terms used in physical and social science to refer to real referents independent of explanatory theorising. Scientific claims are always partial and fallible, but those that sustain and are accepted *ex posteriori* (after the explanatory event) pertain to a reality that 'must' have been the case for the claim to have been possible (Bhaskar and Lawson, 1998: 3). In such an

account, one that happens after repeated tests of falsifiability are passed, knowledge of the world is posited as true because, given the explanation, the world could not have been otherwise. What is important to note is that, for critical realist positions, knowledge claims gain their legitimacy and universality by identifying the pre-social structural reasons for social and physical events. These reasons depend epistemically on a world whose events dictate the necessary conditions for human thought and activity. In this view, knowledge claims either about the physical world or the social world can be reduced to causal explanations that derive their legitimacy from a scientific method. This method, moreover, is assumed to operate, in ideal conditions, outside the influence of power, politics, and culture. The conditions for the possibility of any knowledge claim derived by such methods adhere within the universal rationality of human cognition and the capacity of that cognition, if in limited ways, to represent the world as it must be. In other words, such approaches attend to what are called, by philosophers, 'transcendental' conditions for knowledge claims. Transcendental conditions are the necessary conditions for the possibility of human understanding. For realism, these necessary conditions for the possibility of knowledge derive from the material and supposedly pre-social world outside subjective or social domains. Because they are outside human causal production they are therefore posited as 'natural'. It is the goal of knowledge production to discern these causal, and thus natural, conditions, and in so doing develop less fallible claims about nature and its extensions, which include the social world.

Critical constructionist or social constructionist accounts of nature also come at knowledge production through an attention to subjective self-awareness. But, they argue for a much more limited scope to claims about how natural and social worlds must be. Indeed, constructivist critiques of realist claims about nature focus on how *all* epistemic claims are always already perspectival and situated. Subjects make knowledge claims, but subjects are situated in particular times and places. It is never the case that knowledge claims, which are interpretive products crafted in socially contextualised spaces, are somehow outside of the historical and cultural contexts from which subjects emerge and within which they operate. There is no "view from nowhere" that legitimates the objectivity of epistemic claims. Political, economic, and cultural context always, and necessarily, shapes knowledge production. We can never know nature as it must be, for our claims about it are a product of the contexts that construct its meaning as a possibility. Social contexts are contingent and changeable, and, therefore, the constructs of 'nature' that emerge from them must also change.

Constructionist accounts emerge within a commitment to the philosophical recognition that history, material conditions (ex. economic life, forces of production, etc.), language, textuality, and human phenomenological experience constitute fundamental limits to what is knowable, and thus say-able, about the natural world. By attending honestly to the contingencies and differences such limits reveal, constructivist critique aims to forestall and counter determinist, reductionist, and scientific appropriations of people, politics, and nature under the realist or positivist guise. In other words, critical constructivism famously seeks to 'de-naturalise' political and ethical claims (ex. Castree, 2005: 108-176; 2014: 7-8, 321, and *passim*). This is because the claim to nature is revealed as *itself* a product of socio-historical dynamics within which power operates as a conditioning force (Smith, 2010). It is never possible to be outside the productive influence of power, and so it is never possible to make epistemic claims that are somehow not entangled within human social intentions. As a consequence, appeals to 'nature', as though such appeals could be objectively or transparently made, are revealed as ideologically embedded and ideologically productive. For instance, racial inequality is not a function of so-called natural difference; gendered inequalities are not the product of pre-social sexual determinants. Differences do exist, but constructivist approaches, importantly, seek to denaturalise the bulwarks that regiment power by unveiling the ways difference is rendered and mobilised by structures of power. Racism, sexism, homophobia, classism, and other exercises of social prejudice and exclusion are, quite rightly, read as complex practices emergent from within social contexts of violence and domination, colonialism, imperialism, capitalism, and industrialisation.

It is important to recognise that, like positivist and critical realist accounts, critical constructivism also focuses on transcendental arguments. It seeks to uncover the necessary conditions for the possibility of a knowledge claim. Only, for constructivists, after the influence of hermeneutic, historical materialist, and poststructuralist critiques, necessary conditions are understood to be historically and textually bound. Speaking and understanding is always situated within modes of production, languages, cultures, classes, frames of reference and interpretation, etc.; we are products or constructs of the historical situations within which we speak. Speak we must, but in doing so we must be attentive to the conditions that make possible our speaking. Since these conditions are not knowable as 'natural', that is, as if we could speak from outside the houses of language and culture within which we necessarily reside, we must speak in ways that are reflexively attentive to the conditions of our *specific* possibility. Being correct is a matter of pragmatic consensus building across epistemic communities. Being ethical, or being politically responsible, is a function of attending ever more carefully to the transcendental, that is material, conditions of our epistemic limits. For constructionists, these material limits are historically, textually, and culturally contingent, and thus also not universally applicable as social explanations. Claiming that they are universally applicable simply arrogates to the claim its false capacity either to speak from outside history, or to impose the claim in an illegitimate exercise of dominance.

Thus, critical realist and critical constructionist accounts are each epistemologically concerned. Both centre around what it is possible to know about the world, be it nature or society, or both. For realist accounts knowledge is framed through the lenses of fallibility or probability. For constructionist accounts it is framed similarly through consensus, but a consensus attentive much more radically to the historical and material conditions necessary for the knowledge claim to be spoken, heard, and practiced. Being critical, that is, being attentive to how, why, and for whom knowledge is produced is a matter that lies at the heart of modern epistemology. And, because both are epistemologically oriented, they are concerned with who does the thinking, how that subject or agent thinks, and what the effects of that thinking do in the world.

It is important here for us to turn briefly to a conceptual genealogy of the thinking subject, whose positing drives the metaphysics of critique as reflexive self-awareness. By unpacking this genealogy, we will be able to understand better the latent metaphysical assumptions that underlie the constitution of modern critique, and the experiential assumptions that make possible its separation from world and nature it seeks to know. The separation of the subject from its object, the natural world, is key to understanding the role of critique in analysing what are taken to be the transcendental conditions for epistemic and political claims. Conditions constituted in the separation of a subject from its object are defined as limit conditions. Such limits are further taken as givens in making politically *de-naturalising* claims.

However, it is also these latter assumptions about the material conditions of experience that ontological and relational accounts of socio-natures, the subject of this chapter, seek to redress and, in so doing, set politics on a different footing. Let us turn now to how the critical subject is constituted by a phenomenalist epistemology's approach to the problem of nature.

Critique and Phenomenalism

In explaining why both critical realist and critical constructivist accounts depend on transcendental arguments, arguments that probe the limit conditions for the possibility of knowledge, we must attend to the work of Immanuel Kant, the key modern architect of critique and critical philosophy.

Kant argued that a human's experience of the natural world is mediated, produced, and limited by fundamental cognitive categories internal to her or his mind. These categories are things like: cause and effect, time, relation, quantity, possibility, negation, etc. For Kant, we do not

experience nature or the world directly. Instead, experience is mediated by our peculiar cognitive categories. From knowledge of these categories, together with experience, we are able to derive judgments. Sense data is itself mediated and made possible by particular embodied capacities that come to us from our interactions in the world. Our minds order and construct an understanding of the world from data sensorium based on the structural categories inherent to our minds.

An intuited self-awareness of these categories and their constructions for judgement forms what Kant termed 'the principle of the necessary unity of apperception' (1961, B131-2). The principle articulates a distinction between what the categories produce as phenomena or representations of the world, and the sense of 'a subject which is the same for all my self-attributions...and which can be conscious of its representations' (Ibid.). In other words, subjectivity, the awareness of the self engaged in the work of thinking, emerges in the self-conscious capacity of forming a unity of phenomenal representations. Categories are common to all rational subjects and allow cognition to synthesize representations and, in doing so, the subject itself. Thinking and subjectivity are the intuitive coherence of mediated and bundled representations directed towards a sense of self *and* the world. Reason, for Kant, is the unique ability of the human subject (particular human subjects, mind you – he denied non-Northern Europeans and women the capacity to be rational) to self-scrutinise the constructions that become understanding. Reason gains its authority through the ability of the subject to submit itself to this critical self-scrutiny. Hence, for Kant, if the transcendental conditions for the possibility of knowledge were universal categories common to all human experience, then, by understanding these rational categories, we could construct a doctrine of the science of knowledge into what he termed an 'architectonic', a system of science on the basis of an idea of the whole.

What is crucial to recognise, however, is that, for Kant, and phenomenalist accounts since, including dominant constructionist ones today, the science of critique applies *only* to the experience of the aggregate of knowledge (1961, B860), not about nature or the world as such. Understanding is a claim about what it is possible to know, i.e. experience, and not about the natural world. It was fundamental to Kant's metaphysics that we could never know nature or the world in and of itself; we can only have knowledge, and good scientific knowledge, about phenomenal experience. Kant termed the distinction between the experiential and natural domains a distinction between the *noumenal* realm and *phenomenal* realm. The *noumenal* pertains to the world in itself, about which we could never have direct knowledge; phenomenal, of course, pertains to phenomena or our experience of the world. How can we know about the world itself if the brain constructs our experience for us?

A simple example illustrates the problem. Many scientists argue that the qualities of colours we take for granted about the natural world are not mind-independent features of the world in and of itself. What we term as a colour – red, blue, yellow, etc. – is a construct of the categories or processes in our brains that convert observational diffractions of light in particular ways, and form part of our uniquely human perception of the natural world. Birds, humans, dogs, and insects all experience colour differently. The physical properties of objects are different in important ways from how we, and others, experience them as coloured (Palmer, 1999: 95). This example is simply illustrative, but points to a fundamental philosophical problem of mind and world that became enshrined in Kant's analytic synthesis of phenomenal and conceptual forms. What appears to us as a perception or phenomena of the world is itself always already constructed; it does not exist as we experience it. The act of thinking is inseparable from its content. Moreover, as one recent commentator has noted, 'all we ever engage with is what is given-to-thought, never an entity subsisting by itself' (Meillassoux, 2008: 36). We can never step outside, as it were, our minds to have mind-independent and direct experience of the world as it is in itself.

Such an explanation of thought and critical responsibility separates us, fundamentally from the world. It is important to understand the basis of this separation, because, as we shall see in the next section, when we learn, after constructionism, that categories are *themselves* historical products, epistemology becomes even more complicated, and the question of nature, if you like, even more removed.

Ultimately, of course, I am interested to ask the question, following ontological and decolonising claims: what if the separation that we take to be the grounds of critique is *itself* the problem? What does politics mean then if we take seriously the idea that human consciousness is *not* separate from what we posit as nature? In order to get to this deeply troubling question – troubling, at least, for contemporary social science – we need to parse out, carefully, how and why constructionist accounts of nature may, indeed, be part of the problem.

In the next section, I examine how epistemology critique is a function of a further separation from nature. The story I am telling about the relationship between politics and nature, then, is one that centres on the implications of undoing this learned nature/culture separation. But, first, we need to better understand how critique emerges as a subject's reflexive attention to its phenomenal limits, and its supposedly unbridgeable epistemic separation from nature. Keep in the back of your mind that it is the political implications of unlearning this separation from nature that we are ultimately seeking to ask after.

'The Modern Constitution': Critical Subjects and Nature/Culture Separations

Kant's attention to, and reproduction of, the separation and relation of mind to the world inaugurated a fundamental relationship within modern thought, which has come to be known as 'correlationism' (Meillassoux, 2008; see also, Elden, 2008). Meillassoux describes Kant's central thesis as correlational in the following way:

[W]e only ever have access to the correlation between thinking and being, and never to either term considered apart from the other...we never grasp an object 'in itself', in isolation from its relation to the subject [and] we can never grasp a subject that would not always-already be related to an object (2008: 5).

What is important about the correlational separation is that rigorous self-responsibility and critical freedom emerges in rationally attending to our primary separation. Critique, for Kant, simply is the capacity of the subject, constituted by its relation to an object, but also fundamentally separated from it, to attend both to its own processes of knowing. In doing so, the subject constructs and sediments itself in the exercise of epistemic and political responsibility. In *Critique of Pure Reason*, Kant explains the importance of reason to be reflexive (i.e. critical) as follows,

Reason must in all its undertakings subject itself to criticism; should it limit freedom of criticism by any prohibitions, it must harm itself, drawing upon itself a damaging suspicion. Nothing is so important through its usefulness, nothing so sacred, that it can be exempted from this searching examination, which knows no respect for persons. Reason depends on this freedom for its very existence. For reason has no dictatorial authority; its verdict is always simply the agreement of free citizens, of whom each one must be permitted to express, without let or hindrance, his objections or his veto (A738-739, B 766-767).

Critique, by a self-reflexive subject, aware of its own limits, but responsible to them, thus lies at the heart of conceiving both knowledge and political responsibility for Kant. Freedom is the cause and consequence of the critical exercise. While the *noumenal* world may only be graspable in phenomenal experience, the phenomenal world of experience was required, as a condition of a subject's epistemic and political freedom, to be open to scrutiny and refinement. Rigorous application of reason, question, and doubt to the structures of experience became the site of sole arbitration for a subject produced in the phenomenal unity of apperception, and in responsibility to others. For Kant's phenomenalism, and phenomenologists as they came to be known later, a rational science of perception and experience was possible, and from that, epistemological certainty about the experience of pure reason was also possible. But transcendental conditions were those revealed in a science of the mind for a subject bound to, but separated from, the object world that gives itself within experience. Phenomenalism, and one's critical responsibility to it, thus produces, and ever refines, a necessary distinction between a cultural subject and a natural object. Political responsibility

emerges as *both* an attention to this correlational and epistemic separation, and within one's subjective responsibility to the insurmountable separation.

Later, when it was argued by constructivists that how we think, and thus mediate the world, is a product of our material, historical, cultural, and linguistic perspectives, the transcendental conditions central to Kant's account of knowledge production by a subject were simply historicised and materialised. *But the distinction itself remained.* Indeed, it was enhanced. Necessary epistemic conditions in the correlational production of knowledge about the subject and object were made non-universalisable and contingent on language and material conditions. Crucially, the subject and object distinction upheld by a nature separated from, but shaping, perceptions or representations made by cultural subjects remained. This representational distinction has remained a hallmark of modern thinking since Kant, and continues today in numerous discursive modes inflected by post-structuralism, historical materialism, hermeneutics, and phenomenology.

As has been shown above, both the notion of critique and the idea of the self-reflexive subject emerge in Kant's account of phenomenal experience informed by, but separated from, nature. Kant argued that the transcendental conditions for understanding a science of understanding were possible to discern, as all rational subjects possessed similar necessary capacities. Discover the universality of those necessities, and we can shape a phenomenal science of the understanding. That his claim, at the time, was also predicated on a judgement that excluded as irrational women and non-Northern Europeans has little bearing on the metaphysical separation of subject and object that constructionism also takes for granted. Constructionist accounts do go further than simply decolonising this prejudice, though. Constructionist accounts historicise the transcendental claims, yet retain the logical grammar of necessary conditions applicable only to phenomenal experience. In these latter accounts, the concept and uses of 'nature' is shown to be a product of social and political forces, and culture the capacity to be reflexive about the production of such understanding. In both, however, the subject, that fundamental construct that emerges within modern thought, is produced as capable and responsive to itself. In Kant's metaphysical schema it is responsible to its rational universalizability. In historicist and constructionist accounts, it is rationally responsible to the material conditions that shape its possibility. Both depend on what Latour (1993a) terms 'the modern constitution', the implicit agreement to separate the question of nature from society and the question of politics.

Alterity and Nature-Culture Distinctions

Responsibility to historical and material conditions emerges out of the epistemic and political necessity to attend to how exclusion is produced, rationalised, and reproduced through accounts of nature. Nature can be used as a weapon to rationalise exclusion, as in reductive racisms and sexism. Constructionists work to point out the fallibility and illegitimacy of such claims. Constructionist accounts are, therefore, motivated by a responsibility to alterity, that is, to how discourses are dependent upon and reproduce otherness. I have shown above how phenomenalist accounts are dependent on nature and culture as co-productive conceptual alterities; each is produced by its other in a correlational dynamic. Critique emerges as the capacity of the subject to reflect on its situation and production within this dualist dynamic of alterities to one-another.

Constructionist ethics and politics often circulate around refining the reflexive attention to the insurmountable dualism and the sense of the subject produced by its a separation from nature. As the reasoning goes, if we cannot know nature in and of itself, but we can have critical understanding of how we think about ourselves and our separation from nature in ever more attentive ways, and if we can never have closure on ideas because thinking and speaking are always contingently situated and open to interpretation and re-interpretation, then the most honest and humble thing we can do is to recognise that fundamental impossibility. Ethical and political action resides, then, as some argue, in the relentless and unending work that impossibility to the other demands of individual and collective subjects. This approach to ethics and politics, which derives its

critical impetus from Kant's requirement that critique exercise its freedom in a reflexive subjectivity, is one born in a recognition of both alterity *and* fundamental limitation. It is referred to as an 'aporetic ethics' (Critchley, 2014; Derrida, 2007; Spivak, 2003; 2009). In aporetic readings, ethical action is 'acting as if one could be ethical toward the other, but all the while knowing that it is impossible' (Wainwright, 2013: 70). Critique is the logic or analytic grammar that returns us as critical subjects reflexively, and thus ethically, if we are honest, to the processes of our thinking, and so to our responsibilities, however separated, to others. Again, though, impossibility, by definition, separates the human from the constituent materialities of which we are necessarily a part. Critical 'reflexivity does not give [the other] action, it only defines the rhetoric of humans about [nature]' (Latour, 1993b: 116).

Self-reflexive subjects frame political responsibility and critical freedom within an attention directed inward at rhetorical self-understanding, be that individual or collective. Critical refinement of this self-understanding is honed by attending to what is possible in new orientations to alterity; aesthetics has come to play a significant role in shaping the scope and tenor of this critical purchase (ex. Dikeç, 2015; Jackson, 2016; Jazeel, 2013; Rancière, 2006). In such accounts, including most markedly aporetic ones, the space of the political becomes constituted by, and refines, a critical commitment that emerges within nature-culture separations (Jackson 2014). Indeed, it remains both a product of, and critically committed to, sustaining the separation between word and world, *because the separation is constitutive of the subject and its freedom*.

Now, imagine what happens if we do *not* accept the 'modern constitution' of that separation, and actively challenge it by saying that the separation is part of the political problem we face in addressing today's ecological crises. Politics becomes a question then not simply of negotiating fundamental limits, but of committing ourselves, sometimes experimentally, but inevitably, to enacting our worlds differently. Let us now turn to examining this implication in more detail.

Part II: Ontological Queries and Postconstructivist Questions

Ontological Queries

Is it really the case that humans are constituted fundamentally separately from what we moderns have learned to call 'nature'? Are we separate, materially and experientially from the non-human world? Simple and very brief reflection on our material conditions indicates that it is patently not the case that we are somehow experientially separated. A frequently trotted out example illustrates the point nicely.

Ninety percent of a human adult body is composed of cells that are not human (Gill et al., 2006; Mehlman, 2012: 162). The health and stability of our bodies is, in fact, dependent, almost entirely, on the ecology of an immensely diverse micro-biome of bacteria, viruses, archaea, and eukaryotes (Coyte et al., 2015). There is, further, very good evidence to suggest that the diversity and health of this micro-biome plays a significant part in shaping human health impacts including on metabolism, mental health, immunity, and cardio-vascular systems (ex. Foster and McVey Neufeld, 2013; Shreiner et al., 2015). Further still, DNA analysis has recently revealed that only 8.2% of human DNA is functional in protein replication; the remaining 91.8% is remaindered from the evolutionary history of life forms from which contemporary *H. Sapiens sapiens* has emerged (Rands et al. 2014). Our mental experience is made possible, thus, by both the evolutionary history and present vitality of non-human others.

Let's extend this illustration out a little further. Again, simple reflection reveals our experiential entanglement. We share air with one another and all other gas exchanging life forms; our digestion, too, is dependent on other life forms and their interactions with external nutrient cycles. What an idea to think that the molecules you are breathing were once hundreds of meters below the sea sustaining a whale, before being exhaled in a great gasp of mid-Pacific surfacing! Or that your chocolate covered dried cherries grew because of the nutrients freed up by worms and

nematode digestive systems in the soils of Western Asia and West Africa! Our metabolic energy production, defined by the Critic Acid, or 'Krebs', Cycle is a function of the alterities within which we are constituted. Caloric energy is necessary for thought, and so thought is dependent on a wider material metabolic relations that make it possible. These are banal examples, but reveal simple and often overlooked material relations within which we emerge as questions for ourselves and others. Whereas Marx, crucially, drew sociological attention to the constituting materialities of inter-dependent human sociality mediated through labour (ex. 1970), these examples extend social implication to more-than-human ontological dynamics.

Let's expand the connections a little further still. Take a deep breath. That inhalation you have just completed '...has 36 percent more molecules of carbon dioxide than it would have had in 1750' (Marris, 2013:2). Not only are you imbricated in the wider biosphere of other gas exchanging life forms, like bacteria and plants, but, simply by breathing, you are also enrolled, literally, within the political economies of industrialism, capitalist expansionism, and on-going resource colonialisms, that, at least since the early to mid 18th century, have shaped not only the rapid planetary concentrations of anthropogenic greenhouse gases, but the mobilities, communicative connections, and developmental opportunities (and inequalities) enabled by fossil hydrocarbons (ex. Huber, 2013; Mitchell, 2011). The simple fact that you are reading this text is the result of an immensely complicated network of socio-technological production, reproduction, circulation, and maintenance enabled by the materialities of both carbon energy and the socio-political systems that sustain its dependence. Your experience of this text, its possibility, and how you will use it are all dependent on an incomprehensibly vast *intra*-action of living and non-living dynamics – assemblages – that come together in fleeting moments of conscious specificity we have learned to call 'subjective experience'.

These relationships do not exist outside of an intrinsic, internal core that reflects in judgment on their possibility and changeability; more-than-human materialities are the very make-up of the human (Massumi, 2014: 93). They *are* what it *is* to think, respond, emote, and be affected. In ontological emphases with the more-than-human, there is no problematic of experiential mediation with nature, no enquiry of word and world distinctions, and no question of representation. Experience, sign, text: these are *themselves* ontologically imbricated in material complexities orientated within, and from, cosmo-political and onto-epistemic holisms or ecologies of relation (Barad, 2007:375; see also, for ex. Blok and Farias, 2016; Hinchliffe, 2008; Hinchliffe *et al*, 2005; Stengers, 2010). What is important is how agency, action, thought, and possibility emerge from the relations enabled across these complexities. We must become responsible, then, to the plural, emergent properties of dispersed and specific difference within which we find ourselves, and towards which we *already* act.

Postconstructivist Questions

If nature and the environment are progressively normalised no longer under explicitly humanist or constructivist accounts that separate experiential awareness from what materially constitutes us, it is so for a very simple reason: it is not possible to draw a line between what counts as 'us' and what does not count as 'us'. How, then, do we, as critical thinkers, demarcate where and when the human subject begins and ends as a reflective agent, when its conditions of possibility are bound up within the material and vital capacities of innumerable others, non-human and even non-living? Can we even, or should we give up the idea of the subject as the necessary space of the political? Increasingly, many say yes to the latter. We should give up concepts and practices that space the political through a subject separated from the world.

Because, if we are honest to our material conditions, *there is no gap*. The forgoing account, via Kant, of the separated political subject emerged from and exercised itself within 'the postulated gap (of its own making) between *res cogitans* and *res extensa*' (Barad, 2007: 375). Yet, as is observable from the simple examples presented here as ontological queries of intra-dependent embodiment, perhaps the space of subjective emergence resides less in defining the terms by which a subject is

'specifically situated in the world, but rather [the terms] of being *of* the world in its dynamic specificity' (Ibid., 377). Subjective experience is, instead, a crease or fold (Deleuze, 1993; see also Wylie, 2006) of the interactive assemblages that both make our specific worlds, and the acts of our looking. As assemblages shift and change, so does the fold and location of experience and subjective self-awareness. You are, literally, not folded as you were when you were a child; some few folds remain, others have disappeared, but you are not materially the same. Or, add a psychoactive mix of plant agents into your system like tobacco, yākoana, peyote, ayahuasca, or iboga; you will be folded, some argue, into other worlds (Kopenawa and Albert, 2013; McKenna, 1992).

Decolonial perspectives have been arguing the same for years. There is no gap between the life of the mind and nature. How could there be if thought is a function of the ecologies that make it possible? The gap is itself the ideological product of a religiously inspired separation of subject (mind) and object (nature) that seeks to consolidate power and control through apparatuses that assert particular world-views, and worlds, as legitimate, and others as irrational, inhuman, diminished, or, at best, naïve. The political question, of course, comes with the assertion and exercise of lifeways in the understanding that thought and the world are not separate. Mignolo characterises the problematic and its implications as follows: 'If you do not have subject-object correlation...on which your epistemic principles could be built and your knowledge structured, then you do not engage in acts of "representation"... but instead in "intersubjective enactments"' (2011: 226). Such enactments require us to recognise that, as the Australian Aboriginal educator and activist, Mary Graham, writes, 'there is no division between the observing mind and anything else: there is no 'external world' to inhabit (2008: n.p.). Critique and critical reflection becomes not negotiating the limits of the insurmountable gap, but enacting oneself in the ways that one's worlds make one possible. We are, in other words, always being made anew within holistic processes of living, deciding, committing, reneging, and trying. We are the sum total of the processes, including the so-called abstract 'conceptual' processes, that make us and our decisions possible. Our attention, in enacting, should be, therefore, to the ways these processes immanently³ work.

Postconstructivist ecological approaches, likewise, also emphasize enfolded specificities of worlds, and distinguish themselves via enactments or commitments to material immanence. Immanence is a technical term, but it simply means that thought and self-awareness are produced within *and only* as a facet of diverse movements and materialities that constitute us. We are not separate to structural things or necessary conditions, as Kant's transcendent account ordered us in a relation of inside and outside. 'There is no subject behind the creative act, existing prior to the process' (Massumi, 2014: 96). We simply *are* the diversity of these movements within which our remaining makes us possible, and different from one-another.

There are only relations of movement and rest, speed and slowness between unformed elements, or at least between elements that are relatively unformed, molecules and particles of all kinds. There are only...subjectless individuations that constitute collective assemblages. ... Nothing subjectifies, but haecceities [ie. unique properties] form according to compositions of non-subjectified powers or affects. We call this plane...the plane of immanence...the plane of Nature (Deleuze and Guattari, 1987: 266).

An analogy may help to explain what is meant by 'immanence': think, for example, of origami, the art of Japanese paper-folding (Deleuze, 1993: 7). The relationship between your intent to fold the paper and the sheet of paper contains the immanent possibilities of the form you might, or might not, make. The immanent potential within the material, the sheet of paper and you, may be a swan, a crane, a hat, star, dragon, or any number of things possible within the relational dynamic of a skilled folder and a sheet of paper. The folded form appears to have interiors and exteriors, but these are simply facets of the material potential intimate to the forms' possibility, your hands, your learning, and what the specific paper allows.

³ 'Immanence' means for something to remain within, and refers to the specific, impersonal, and indefinite but necessary forces that together make an event of life possible.

So it is, but infinitely more complicated, with all matter as such. We, as human forms, are made possible by other immanent potentials, and we congeal for only short moments, eighty to a hundred years if we are lucky. Vast immanent assemblages of *impermanence* and change sustain us. And we sustain impermanent others in numerous unknowable forms now, and when we die and pass into dispersion.

Critique within this flattened multiplicity entails the need for a 'topological sensitivity' (Shields, 2012: 55; see also, Marston et al. 2005) to the manifest experience of the social as an ecology of specific, immanent relationships (Descola, 2013: 5). Process is key; it is all there is. Form does not precede the processes, the flux and flow of material relations that give rise to them (Ingold, 2013: 7). As representations, claims to identity, subjectivity, or collectivity simply *are* the instituted material expression of the 'biosocial ensembles' of which they are made (Palsson, 2013: 22–41). Social life, thereby, is an implicate enfolding of totalities of relation, human and more-than-human, for which, phenomenality becomes merely a momentary, if complex, outcome (Ingold, 2008: 80). Thinking, then, is a distributed effect immanent across the entire ecology of material relations – the cosmos – within which human beings and their concerns emerge (Ibid., 79).

Part III: Enacting Commitments

The political onus for ontological accounts lies less on an end game of 'uncovering the synthetic basis of ostensibly natural facts' within a stable sense of phenomenal identity, and much more on transformatively engaging ensembles of ecological factors that sediment the vitality of oppressive ideas (Sharp, 2011: 55–56). In other words, postconstructivist forms of thinking do not reflect upon various phenomenal identities already constituted, as though forms or natures are unaffected in the act of analysis. Rather, postconstructivism imbues a compositional and 're-naturalising' effort to experiment with a careful attention to the sensible, singular points at which the constitution of a phenomenon can be engaged. In so doing, we can become otherwise; we can orient our living together such that it becomes enacted and committed anew. Immanence refers, fundamentally, to the fact that thinking, knowledge claims, co-constitutive responsibility, and political intervention are processes of ongoing material transformation and enactment – relational, ontological creation and commitment rather than ideology critique, discovery, or the prescription of conceptual limits: aesthetic, impossible or otherwise (de Bestegui, 2010: 6–7; see also Jackson, 2014: 74–5).

The problem ontology and decolonial options bring is that critique must become something other than a subject reflecting on its own separation, sitting in a tribunal of judgment on itself and others; there is, for such options, recall, no gap to navigate. The point is not that we need to do away with speaking truth to power and injustice, but to recognise two things about how critique is often mobilised. First, critique emerges, after Kant, as reflexive negotiation. It is a mode that emerges in a poststructuralist tradition that begins with the recognition of difference instantiated in historical and linguistic contingency, which *itself* emerges from Kant's critical phenomenalism that navigates a postulated divide between *noumena* and *phenomena*, nature and culture, subject and object. Second, critique might better be thought, after ontological and decolonial queries, as a compositional effort or performance, an 'enactment' as Mignolo terms it, that commits us in certain ways *with* the pluriversal lives of others. 'Commit', from the Latin, *committere*, to join and entrust in a putting forth, or sending out, as against 'critique', from the Greek *krinein*, which means to separate and decide in judgement. The ontological emphasis of committing lies less in constitutive impossibility, than in necessary, compositional plurality that enacts, composes, and entrusts with the diverse, often incommensurable, but possible worlds of others that are already on-going.

Politics becomes, with ontological and decolonial options, not a field limited by questions of representation, recognition, state, or legitimacy, but an 'intra-active' orientation, a form of life, operating through the extant semiotic relations and productions immanent in the folds of every assemblage. Reflexive critique struggles to open us in embodied generosity whether in action and

idea; critique cannot open us to radical material or relational agency because it operates with the logic that 'behind any idea of nature, we will find only human agency' (Sharp, 2011: 56). We need rather, as Sharp argues, to re-naturalize our approaches. Now, 're-naturalization is not a direct antonym to the critical tradition of denaturalization. ... It remains vital that we continue to 'denude truth claims as "truth effects", but, 'we ought not to think that we are the sole [political] authors of such effects' (p.56). It means committing ourselves conceptually to the many 'Earthbound' (Latour 2013) grounds and stories that are carrying and composing us. '[T]he first step is to recognise that the world is more than one socio-natural formation; the second is to inter-connect such plurality without making diverse worlds commensurable' (de la Cadena, 2010: 361).

Compositional grounds are not static essences nor epistemic reflexivities of our own making and assertion. They are active material ecologies from which we emerge as temporally bound constituents in our commitment. They privilege those agencies that require us, if we wish to build human futures, to listen politically, socially, and economically, to the wider material reverberations of which we are inextricably a part. We are, whether we like it or not, processually, and so politically, bound in commitments with the worlds of others who do and are speaking. Our political task, then, is to attend to the many incommensurable ways our living relational others think and act. In attending to these, we can 'create the conditions for new thoughts' (Strathern, 1988: 20). But, this means more than simply returning political critique to culture and world-view. Re-naturalising can affirm the variability intrinsic to relational existence. To be a relational being is to undergo a history of constitutive affections and transformations in response to encounters with other beings, human and nonhuman. To pretend otherwise, that is, to denaturalise without recognising how we are composed and committed by pre-linguistic relations actually forecloses the possibility of other worlds, and their many inhabitants, speaking.

Ontology and the end of critique (as we knew it)

Responses to what seems like an esoteric and abstract politics of life engendered by ontological and decolonial options have been vexed. The primary response has been, 'this is not politics! Or, if it is, it's pretty impractical. And it's certainly not a politics I recognise.' Well, that may be true, and, in part, that is the very point. Ontological and decolonial options seek precisely to disrupt and problematize recognition. Political ontology and decolonial options are not interested in playing by the rules of a politics of recognition. They are trying to tear up those assumed rules.

In a counter to these attempts, some fear depoliticisation. Bessire and Bond worry that an ontological emphasis on a 'sociology of the possible...diverts attention away from the actual existing politics of nature and culture (2014: 449).' This charge is echoed by Castree when he suggests that '...such ideas cut little ice in the wider world or in much of academia outside the social sciences and humanities...[wherein] we continue to rely on "the modern constitution", in large measure, to apprehend the world' (2014: 321). Swyngedouw, too, via Badiou similarly worries about ecological ontology becoming, as Badiou puts it, 'a gigantic operation in the de-politicisation of subjects' (2008: 139; Swyngedouw, 2011).

These dismissals in favour of status-quo political frameworks miss the point of ontological and decolonial inflections in two inter-related ways. First, it is entirely false that the 'wider-world' is little interested in alternative ontologies of nature that do not presume nature-culture distinctions, or of critical subjects removed from their material constituencies. As the Metis scholar and activist Zoe Todd writes, '[I]ndigenous thinkers...have been writing about Indigenous legal theory, human-animal relations and multiple epistemologies/ontologies for *decades*.' (2016: 14, emphasis in original). The ontological 'call, though brilliant and necessary', she writes, is predicated on 'disciplines that continue to erase Indigenous bodies (2016: 8). They render absent the many voices of the wider world, those which do *not* rely on 'the modern constitution' and seek to actively resist it in an anti-colonial politics of resistance and resurgence (see ex. Coulthard, 2014; Simpson, 2011). Castree and co's conservative appeals for leftist environmental political orthodoxy, unwittingly, also renders

absent those bodies of the many alternative worldviews *outside* the academy in the wider world that continue to be silenced, both by a Eurocentric ontological turn, *and* by appeals for the de-naturalising critique of 'transcendental labour in the service of the commons' (Bessire and Bond, 2014: 449).

Second, the problem *is* politics as usual, and, moreover, the colonising academy that continues to arrogate to itself the right to lift the veil of ideology from those supposedly unable to see their hegemony and interpellation. Political ontology rejects the politics of recognition and inclusion manifest by a tradition that worries about 'de-politicised subjects' or the lack of critical appeal to a wider world. The problem *is* an epistemology that continues to appeal, in the same way, to a separated critical subject, part and parcel of the metaphysics that bifurcates nature from culture in the service of exploitation and control.

Political ontology and decolonising options reject the epistemologies of recognition erected by 'the modern constitution' of subject and object, nature and culture. Moreover, this rejection comes from precisely from *outside* the academy and its institutionalised geopolitics. Whether it is particular indigenous concerns, eco-feminist movements, food sovereignty and anti-GMO, land workers' alliances, Zapatismo, Greenpeace, Earth First, permaculture, or marine and mangrove conservation, or even literature and non-academic nature writing – think, for example, in the Anglophone tradition of Robinson Jeffers, Aldo Leopold, Rachel Carson, Wendell Berry, Barry Lopez, Alice Oswald, or Nan Shepard, to name but a very few – the wider world has been, for a very, very long time, begging and pleading, or just getting on and *doing*, a different ethics and politics than that invoked by 'the modern constitution' (ex. Green, 2013; Shiva, 2005, 2012) and its critical, academic preservationists. Saying that the relevance of politics to the status-quo of dominant hegemonies makes it 'political', summarily dismisses perhaps the majority of how the Global South actually lives their diverse, day-to-day lives, together with the ecological complexities that make the vitalities of living possible, in both their fragilities and their many resiliencies.

By Way of Conclusion: Enacting Possible Commitments

Two simple and well known examples bear out wider ontological options. The first example of how ontological and decolonial approaches have been woven into challenging environmental politics as usual, even within national scales, may be seen in *sumak kawsay* or the movement in South America also known as 'Buen vivir' (Gudynas, 2011; Radcliffe, 2012; Walsh, 2010). This movement, now written within the formal constitutions of both the Plurinational State of Bolivia and Ecuador, draws from indigenous understandings of well-being, co-habitation with others, and the sacred, in this case, 'Pachamama', the Earth mother goddess. *Sumak kawsay* and its sister concept, *suma quamaña*, are concepts drawn from Quechua-Aymara cosmologies of living-well, wherein complementarity, reciprocity, and a relationship to the whole life-force of existence are practiced in social, environmental, spiritual, and territorial contexts. A pluralising endeavour, the onus of 'Buen Vivir' on developmental communities derives from an extension of sociality and creative responsibility to the non-human world and the sacred worlds. '[P]roposals of the biocentric environmental perspective, [and] also indigenous positions ... recognize that the nonhuman (either animals, plants, ecosystems or spirits) have will and feelings. Thus, the polis is expanded, and the concept of citizenship is widened to include these other actors within environmental settings' (Gudynas, 2011: 445). In addition, rather than return to a politics that determines the limits of economic and social life, Buen Vivir, which is post-capitalist *as well as* post-socialist, engages an open experiment with material and thus social possibilities. As Gudynas writes, 'Buen Vivir does not endorse the classical understanding of a unidirectional linear progression of history, following a precise path, as several directions are possible' (Ibid.). What these are is up to us to make, possibly fail with, but also have to the opportunity afterwards to fail better.

The creative, embodied, and experimentally non-hierarchical politics aspired to by Buen Vivir, Gudynas notes, is also one that shares much with a legacy of feminist perspectives'; Gudynas acknowledges that Buen Vivir has much to learn as well from feminism's critique of nature (Ibid: 446).

This brings me to the second simple exemplar of an ongoing ontological re-writing of politics as usual: eco-feminism. Feminist re-readings of, and challenges to, the gendered production of nature-culture distinctions and subject-object dichotomies are synonymous with the emergence of feminist discourse itself (ex. Merchant, 1980; Plumwood, 1993; Warren, 1997). This applies not only to academic discussions, but very much in the critically attuned and lived realities of women around the world.

Within the social sciences and humanities, one clear example relevant to political ontology and decolonising options bears out this relevance. Gibson-Graham and Roelvink's (2009) essay on a feminist economic ethics for the Anthropocene suggests itself as example of an ontologically sensitive reading of politics against the grain. It seeks to retain the critical capacity to expose relations and dynamics of power, and open at the same time an experimental 'process of learning involving a collective of human and more-than-human actants—a process of co-transformation that re/constitutes the world' (p.320). Indeed, the work of Gibson-Graham (see for ex. 1996) and the Community Economies Collective more generally focuses on a processual politics and creative building of pluriversal possibility through research that co-productively builds other worlds in experiments of praxis. Critique becomes, in their work, not that of separation and reflective self-awareness, but of involving the being-in-common of humans and sometimes the more-than-human to 'proliferate alliances and avenues of action' (2009: 343). Our critical responsibility as scholars is, they argue, to the creation of possibilities for flourishing and living well, both because, materially, we are already within them, and, importantly, because they are also *already* ongoing in the everyday lives of much of the wider world. Thus a relational politics is built that extends itself through an ontology of becoming, both to other worlds, and to other existing and possible worlds.

I began the chapter with an epigraph from the First Nations Coastal Salish poet and novelist, Lee Maracle. Let me conclude by invoking another poet, this time the American ecological poet, Robinson Jeffers. Jeffers ends his acclaimed poem, 'Carmel Point', written in the early 1950s, with a prescriptive invocation that resonates much of what has been argued here:

– As for us:

We must uncenter our minds from ourselves;
We must unhumanise our views a little, and become more confident
As the rock and ocean that we were made from (2003: 175).

What the option of a political ontology does is problematize what is meant by human; it does so by also asking us to think differently about what we have learned to call nature. It points to the innumerable processes of life of which we are inextricably an immanent part: rock and ocean; wind and light; one another. But, it also does more: it renders this problematizing work practical. Its motivating question is: how do we think and act with respect to such forces?

On the one hand, such a question may seem puzzling and abstract. How do we get a hold of this as politics in the multiple? It is all very well to quote poetry, but how do we do it? How does it help us to decide and on what to decide? Responses to these questions lie in the other side of the story. So, on the other hand, as I have endeavoured to emphasize throughout, what we have learned to call ontological practices, enactments, and commitments are *also* part and parcel of what have been largely silenced by a modernist tradition that erects the political problematic of the human in a separation from its equally contiguous production of nature.

The invention of nature is commensurate with the invention of the human as a '...present ethnoclass' (i.e. Western bourgeois) conception of the human, Man, which over-represents itself as if it were the human itself' (Wynter, 2003: 260). Our challenge now, a challenge Wynter terms 'the struggle of our new millennium' (Ibid.) is to learn to undo our learning of nature and so also the 'humanised' human as mutually exclusive domains. 'Unhumanising', as Jeffers and Wynter call it, means unlearning those colonial and epistemic discourses that over-represent a monolingualism of nature and of the human. It is not to undo scientific learning, but to really listen to what it describes:

Embodiment is a matter not of being specifically situated in the world, but rather of being of the world in its specificity... Knowing is a direct material engagement, a practice of intra-acting with the world as part of the world in its dynamic material configuring, its on-going articulation' (Barad, 2007: 377-79, emphasis in original).

Yes, but, how do we do this, you ask, again? As I've endeavoured to argue, examples of political and ethical commitment through 'uncentering' and 'intra-acting' abound. Options from cosmologies indigenous to Abya Yala, Tawantinsuyu, and Anahuac (the regions which came to be formed as South and Central America, and the Caribbean), from a Nuuchanutlh world-view in what is now North-west America, from ontological stories about human implication with the micro-biomes that make us possible, to Aboriginal Australian cosmologies have been presenting themselves as *political* options, some for some time.

Consider further beacons of practical and concerned engagement that light political ways otherwise. Such efforts could include such practical measures as: incorporating sacred forms of relation in environmental and economic law, rather than simply invoking rights, property, or modernist development imperatives (ex. Borrows, 2010; Singh, 2015); widening ecological decision making to include, as forms of economic cost and value, previously un-accounted 'externalities' (ex. Suzuki, 2014); expanding boundary notions of social infrastructure to include the bios and material relation in our ecologies of knowledge production (ex. Glissant, 2003; Leigh Star, 1995; Puig de la Bellacasa, 2015); enhancing person-hood and political accountability as part of wider socio-natural assemblages incorporating human possibility (ex. Todd, 2014); decolonising curricula, as numerous efforts are currently engaging across educational attainment levels so to pluralise narratives of human possibility, imagination, and successful flourishing; beginning discussions of peace and politics within already embodied positive commitments and enactments of compassion, love, and empathy rather than in assumptions of social agonism (ex. Bregazzi and Jackson, *forthcoming*); attending to how economic and political forms of praxis already shape diverse communities of localised flourishing (ex. Gibson-Graham, 1996); or, widening the scope of aesthetic politics from subject centred accounts to distributed, enacting sensibilities (ex. Jackson, 2016). All of these entail a commitment to enacting living and thinking together in forms where critique is more than passing judgment on the limits of its own possibility.

The point is not that these specific cosmo-politics are universal answers, although much, no doubt, could be learned from them. The point, rather, is to say that our political and ethical responsibility lies in learning to listen to what these possibilities say as options for what it means to be human.

The story of being human, just like the corollary story of nature, is not one owned by one narrative, a dominant one that over-represents politics as much as it does nature and the human. Stories and their possibilities are as varied as human (and non-human) languages and practices. What it means for politics, quite simply, is a radical return to the immanent materialities that constitute meaning making. There is no one answer for all of us. Modernist, enlightenment narratives have tried that, and while producing wondrous successes in the form of anti-biotics and flying machines, have, through those same inventions, imperilled planetary futures and reduced human imaginaries through the ongoing violences of colonialism and numerous reactionary fundamentalisms.

Re-naturalization is not simply a replacement for de-naturalisation or critique. Thinking with what ontology requires – that we are always already materialized with others in how and what we think – demonstrates how critical political touchstones like the human, or the subject, or even 'nature', are only one part, and perhaps even a problematic part, of the continuing orthodoxies of 'the political'. If we also want to try to reduce our on-going harm to, and promote enabling interactions with, our sustaining ecologies, then we need to be able to see in the more-than-human those capacities of life which we also cherish as (in)distinctly 'human'.

Ontological and decolonial options suggest that we need to study and understand the many and varied processes through which political relations of respect, care, and cooperation are *always already* taking place within and beyond the sphere of the human (Thomas, 2015). 'Nature' is no longer

a space without capacities for refracting goodness. We can learn to recognize in its complexities, much as many peoples have done for millennia, productive capacities for political meaning and ethical association; these recognitions are also echoed by a politics ontology demands: commitment via those others that make us possible. The meaningful division for the future, therefore, is not between humans and 'nature' but between, say, levels of care, support, love, enmity, empathy, or compassion (Rose, 2016); between relationships as they manifest themselves materially, and so also politically. Such relationships are transversal capacities within the planes of material immanence that make up human possibility, and thus not peculiar to human sociality.

It is, precisely, that these transversal material capacities are embodied commitments to a polis of life as well. I have argued here that what it means to engage an ontological spacing of 'the political' entails: first, cultivating embodied sensibilities oriented in and towards alterity; second, committing to, rather than judging, specific worlds of creative possibility and becoming; and, third, embracing positive or productive problematics in building worlds otherwise.

Critique's learned reflexivity to its own epistemic limits, a studied consequence of a particular modern and post-structuralist tradition founded in the reified notions of subjectivity, reason, and human language, is an orthodoxy in need of revision. It is challenged here, not for how it encourages reflexion, but for how critique carries forward, implicitly, a metaphysics of separation, and a production of thought in the mode of limitation and constraint that struggles to commit to the world. Instead it commits only to a constrained notion of itself as a thinking or self-conscious subjectivity. In doing so, critique precludes itself recognising that thought and the intimate conditions of the *socius* and politics also lie beyond what we have learned to call 'human' and what we have equally learned to call 'nature'. Selves and what we call thought arise from worlds as they change, and are not posited from a pre-existing mind outwards. What ontology, and thinking from ontology otherwise, calls us to are forms of critique, forms of thought, invested in the committed pluralities of life from which they emerge. These are ecologies of relation within which thought itself is implicate and enrolling. These are also ecologies that demand something else of us when think of 'nature': an enactment of imagination with our worlds.

References

Archer, M. et. al. 1998. *Critical Realism: Essential Readings*. London: Routledge.

Atleo, E. R. (Umeek) 2001. *Principles of Tsawalk: An Indigenous Approach to Global Crisis*. Vancouver: University of British Columbia Press.

Badiou, A. 2008. *The Meaning of Sarkozy*. Verso: London, 2008.

Barad, K. 2007. *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Durham and London: Duke University Press.

Bergen, V. 2010. 'Politics as the orientation of every assemblage'. *New Formations*, 68, Spring, pp. 34-41.

Bessire, L. & Bond, D. 2014. 'Ontological Anthropology and the Deferral of Critique.' *American Ethnologist* Vol. 41, No. 3, pp. 440-456.

Bhaskar, R. and Lawson, T. 1998. 'Introduction: Basic Texts and Developments' in Eds. M. Archer, et. al. *Critical Realism: Essential Readings*. London: Routledge. pp. 3-15.

- Blaser, M. 2010. *Storytelling Globalization from the Chaco and Beyond*. Durham and London: Duke University Press.
- Blok, A. and I. Farias. 2016. *Urban Cosmopolitics: Agencements, Assemblies, Atmospheres*. Abingdon: Routledge.
- Borrows, J. 2010. *Drawing Out Law: A Spirit's Guide*. Toronto: University of Toronto Press.
- Bregazzi, H. and Jackson, M. (forthcoming) 'Agonism, Critical Political Geographies, and the New Geographies of Peace', *Progress in Human Geography*.
- Castree, N. 1995. 'The Nature of Produced Nature: Materiality and Knowledge Construction in Marxism', *Antipode*, Vol. 27, pp. 12-48.
- Castree, N. 2005. *Nature*. Abingdon: Routledge.
- Castree, N. 2014. *Making Sense of Nature*. Abingdon & New York: Routledge.
- Chakrabarty, D. 2009. 'The Climate of History: Four Theses' *Critical Inquiry* Vol. 35, No. 2, pp. 197-222.
- Chakrabarty, D. 2011. 'Postcolonial Studies and the Challenge of Climate Change' *New Literary History*, Vol. 43, No.1, pp. 1-18.
- Coyte, K. Z., J. Schluter, and K.R. Foster. 2015. 'The Ecology of the Microbiome: Networks, Competition, and Stability'. *Science*. Vol. 350, Issue 6261., pp. 663-666.
- Critchley, S. 2014. *The Ethics of Deconstruction: Derrida and Levinas*. 3rd Ed. Edinburgh: University of Edinburgh Press.
- Cornell, D and Seely, S. 2016. *The Spirit of Revolution: Beyond the Dead Ends of Man*. Cambridge: Polity Press.
- Coulthard, G. 2014. *Red Skins, White Masks: Rejecting the Colonial Politics of Recognition*. Minneapolis: University of Minnesota Press.
- Dabashi, H. 2015. *Can Non-Europeans Think?* London: Zed Books.
- De Bestegui, M. 2010. *Immanence: Deleuze and Philosophy*. Edinburgh: Edinburgh University Press.
- De la Cadena, M. 2010. 'Indigenous Cosmopolitics in the Andes: Conceptual Reflections beyond "Politics"'. *Cultural Anthropology*, Vol. 25, No. 2, pp. 334-370.
- Deleuze G, 1993. *The Fold: Leibniz and the Baroque*. Minneapolis: University of Minnesota Press.
- Deleuze, G. and F. Guattari. 1987. *A Thousand Plateaus: Capitalism and Schizophrenia*. Trans. B. Massumi. Minneapolis: University of Minnesota Press.
- Demeritt, D. 2001. 'Being Constructivist about Nature', Eds. N. Castree and B. Braun, *Social Nature*. Oxford: Blackwell. Pp. 22-40.

- Demeritt, D. 2002. 'What is "the social construction of nature?"' *Progress in Human Geography*, Vol. 26, No. 6, pp. 767-790.
- Derrida, J. 2007. *Psyche: Inventions of the Other*, Vol. 1. Ed. P. Kamuf, E. Rottenberg. Stanford: Stanford University Press.
- Descola, P. 2013. *The Ecology of Others*. Trans. G. Godbout, B.P. Luley. Chicago: Prickly Paradigm Press.
- Dikeç, M. 2015. *Space, Politics and Aesthetics*. Edinburgh: Edinburgh University Press.
- Elden, S. 2008. 'Dialectics and the Measure of the World'. *Environment and Planning A* November 2008 Vol. 40, No. 11 2641-2651
- Escobar, A. 2007. 'The "ontological turn" in social theory. A Commentary on "Human geography without scale", by Sallie Marston, John Paul Jones II and Keith Woodward' *Transactions of the Institute of British Geographers* Vol. 32, Issue 1, pp. 106–111.
- Escobar, A. 2010. 'Postconstructivist Political Ecologies'. *The International Handbook of Environmental Sociologies*. 2nd Ed. Eds. M.R. Redclift and G. Woodgate. Cheltenham, UK.: Edward Elgar. Pp. 91-105.
- Escobar, A. 2011. *Encountering Development: The Making and Unmaking of the Third World*, 2nd Ed. Princeton: Princeton University Press.
- Foster, J.A. and K. McVey Neufeld. 2013. 'Gut-brain axis: how the microbiome influences anxiety and depression'. *Trends in Neurosciences*. Vol. 35, No. 5. Pp. 305-312.
- Gibson-Graham, J-K. 1996. *The End of Capitalism (as we knew it)*. Minnesota: University of Minneapolis Press.
- Gibson-Graham, J-K. and G. Roelvink. 2010. 'An Economic Ethics for the Anthropocene' *Antipode*. Vol. 41, No. 5, pp. 320-346.
- Gill, S. et al. 2006. 'Metagenomic Analysis of the Human Distal Gut Microbiome'. *Science*. Vol. 312, pp.1355-1359. 10.1126/science.1124234
- Gilroy, P. 2015. 'Offshore Humanism.' The 2015 Antipode RGS-IBG Lecture. 02 September 2015. <http://antipodefoundation.org/2015/12/10/paul-gilroy-offshore-humanism/> [Accessed: 19.02.2016].
- Glissant, É. *The Poetics of Relation*. Trans. B. Wing. Ann Arbor: University of Michigan Press.
- Glowczewski, B. 2011. 'Between Spectacle and Politics: Indigenous Singularities' in, *The Challenge of Indigenous Peoples*. Eds. B. Glowczewski and R. Henry. Oxford: Bardwell Press. Pp. 1-23.
- Graham, M. 2008. 'Some Thoughts About the Philosophical Underpinnings of Aboriginal Worldviews', *Australian Humanities Review*, 45 www.australianhumanitiesreview.org/archive/Issue-November-2008/graham.html. [Accessed, 27.07.2016].
- Green, L. 2013. *Contested Ecologies: Dialogues in the South on Nature and Knowledge*. Cape Town: HSRC Press.

- Gudynas, E. 2011. 'Buen Vivir: Today's Tomorrow'. *Development*. Vol. 54, No.4, pp. 441–447.
- Henry, R. 2011. 'Creative Networks: The Poetic Politics of Indigeneity' in, *The Challenge of Indigenous Peoples*. Eds. B. Glowczewski and R. Henry. Oxford: Bardwell, pp. 236-247.
- Hinchliffe, S. 2008. *Geographies of Nature: Societies, Environments, Ecologies*. London: Sage.
- Hinchliffe, S. et al. 2005. 'Urban Wild Things: A Cosmopolitical Experiment', *Environment and Planning D*, Vol. 23, No. 5, pp.643-658.
- Huber, M. 2013. *Lifeblood: Oil, Freedom and the Forces of Capital*. Minneapolis: University of Minnesota Press.
- Huehls, M. 2016. *After Critique: Twenty-First-Century Fiction in a Neoliberal Age*. New York: Oxford University Press.
- Icaza, R. and Vázquez, R. 2013. 'Social Struggles as Epistemic Struggles' *Development and Change*. Vol. 44, No. 3, pp. 683-704.
- Ingold, T. 2008. 'Anthropology is not ethnography'. *Proceedings of the British Academy* Vol. 154, pp. 69–92.
- Ingold, T. 2013. 'Prospect'. In Ingold T, G. Palsson (eds) *Biosocial Becomings: Integrating Social and Biological Anthropology*, Cambridge: Cambridge University Press, pp. 1–21.
- Jackson, M. 2014. 'Composing postcolonial geographies: Postconstructivism, ecology and overcoming ontologies of critique' *Singapore Journal of Tropical Geography*, Vol. 35, No. 1, pp. 72–87.
- Jackson, M. 2016. 'Aesthetics, Politics, and Attunement: On Some Questions Brought by Alterity and Ontology', *GeoHumanities*, Vol. 2, No. 1, pp. 8-23.
- Jazeel, T. 2013. *Sacred Modernity: Nature, Environment, and the Postcolonial Geographies of Sri Lankan Nationhood*. Liverpool: Liverpool University Press.
- Jeffers, R. 2003. 'Carmel Point', *The Wild God of the World: An Anthology of Robinson Jeffers*. Ed. A. Gelpi. Stanford: Stanford University Press. p. 175.
- Kant, I. 1961. *Critique of Pure Reason*. Trans. N. Kemp Smith. London: Macmillan.
- Kohn, E. 2013. *How Forests Think: Towards an Anthropology Beyond the Human*. Berkeley: University of California Press.
- Kopenawa, D. and B. Albert. 2013. *The Falling Sky: Words of a Yanomami Shaman*. Trans. N. Elliott & A. Bundy. Cambridge, Mass. & London: Harvard University Press.
- Latour, B. 1993a. *We Have Never Been Modern*. Trans. C. Porter. Cambridge, Mass.: Harvard University Press.
- Latour, B. 1993b. 'A trojan horse: steps toward an anthropology of science, a conversation with Bruno Latour and Knorr Cetina'. In Callebaut W (ed) *Taking the Naturalistic Turn, Or How Real*

Philosophy of Science Is Done. Chicago: University of Chicago, pp. 105–25.

Latour, B. 2004. *Politics of Nature: How to Bring the Sciences into Democracy*. Trans. C. Porter. Cambridge, Mass. And London: Harvard University Press.

Latour, B. 2013. 'Lecture 5: War of the Worlds: Humans against Earthbound' The Gifford Lectures. University of Edinburgh. <http://www.ed.ac.uk/humanities-soc-sci/news-events/lectures/gifford-lectures/archive/series-2012-2013/bruno-latour/lecture-five> [Accessed 19.02.2016].

Leigh Star, S. Ed. 1995. *Ecologies of Knowledge: Work and Politics in Science and Technology*. Albany: SUNY Press.

Maracle, L. 2011. *Ravensong: A Novel*. Toronto: Women's Press.

Marris, E. 2013. *Rambunctious Garden: Saving Nature in a Post-Wild World*. New York: Bloomsbury.

Marston, S., J.P. Jones, and K. Woodward. 2005. 'Human Geography without Scale'. *Transactions of the Institute of British Geographers*. Vol. 30., pp. 416–432.

Marx, K. 1970. *The German Ideology*. Ed. C.J. Arthur. New York: International.

Massumi, B. 2014. *What Animals Teach Us About Politics*. Durham and London: Duke University Press.

McKenna, T. 1992. *Food of the Gods: The Search for the Original Tree of Knowledge*. New York: Bantam.

Mehlman, M.J. 2012. *Transhumanist Dreams and Dystopian Nightmares: The Promise and Peril of Genetic Engineering*. Baltimore: Johns Hopkins University Press.

Meillassoux, Q. 2008. *After Finitude: An Essay on the Necessity of Contingency*. Bloomsbury Academic, London.

Merchant, C. 1980. *The Death of Nature: Women, Ecology and the Scientific Revolution*, San Francisco: Harper and Row.

Mignolo, Walter D. 1993. 'Colonial and Postcolonial Discourse: Cultural Critique or Academic Colonialism?' *Latin American Research Review*, Vol. 28, No.3, pp. 120–134.

Mignolo, W. 2011. *The Darker Side of Western Modernity: Global Futures, Decolonial Options*. Durham: Duke University Press.

Mitchell, T. 2011. *Carbon Democracy: Political Power in the Age of Oil*. London: Verso.

Palsson, G. 2013. 'Ensembles of biosocial relations'. In Ingold T, G. Palsson eds. *Biosocial Becomings: Integrating Social and Biological Anthropology*, Cambridge: Cambridge University Press, pp. 22–41.

Palmer, S. K., 1999, *Vision Science*, Cambridge, MA: MIT Press.

Plumwood, V. 1993. *Feminism and the Mastery of Nature*. New York: Routledge.

- Povinelli, E. 2011. *Economies of Abandonment: Social Belonging and Endurance in Late Liberalism*. Durham and London: Duke University Press.
- Puig de la Bellacasa, M. 2015. 'Ecological Thinking, Material Spirituality, and the Poetics of Infrastructure', Eds. G.C. Bowker, et al. *Boundary Objects and Beyond: Working with Leigh Star*. Cambridge, Mass. And London: MIT Press. Pp. 47-68.
- Radcliffe, S. 2012. 'Development for a postneoliberal era? Sumak kawsay, living well and the limits to decolonisation in Ecuador'. *Geoforum*. Vol. 43. pp. 240-249.
- Ranciere, J. 2006. *The Politics of Aesthetics*. Trans. G. Rockhill. London: Continuum.
- Rands, CM, et.al. 2014. '8.2% of the Human Genome Is Constrained: Variation in Rates of Turnover across Functional Element Classes in the Human Lineage'. *PLoS Genetics* Vol. 10, No. 7. doi:10.1371/journal.pgen.1004525 [Accessed, 19.02.2016]
- Roberts, T. 2014. 'From Things to Events: Whitehead and the Materiality of Process' *Environment and Planning D*, Vol. 32, No. 6, pp. 968-983.
- Rose, D.B. 2016. 'Thinking Like a Mantis?' <http://deborahbirdrose.com/2016/02/15/thinking-like-a-mantis/> [Accessed, 19.02.2016].
- Sahlins, M. 2013. 'Foreword' In P. Descola, *Beyond Nature and Culture*. London and Chicago: University of Chicago Press. Pp. xi-xiv.
- Sharp, H. 2011. *Spinoza and the Politics of Renaturalization*. Chicago and London: University of Chicago Press.
- Shields R. 2012. 'Cultural topology: the Seven Bridges of Königsburg, 1736'. *Theory, Culture and Society* Vol. 29 No. 4/5, pp. 43-57.
- Shiva, V. 2005. *Earth Democracy: Justice, Sustainability, and Peace*. Berkeley: North Atlantic Books.
- Shreiner, A.B., J. Y. Yeo, and V.B. Young. 2015. 'The gut microbiome in health and disease' *Current Opinions in Gastroenterology*. Vol. 31, No. 1, pp. 69-75.
- Simpson, L. 2011. *Dancing on Our Turtle's Back: Stories of Nishnaabeg Re-Creation, Resurgence, and a New Emergence*. Winnipeg: ARP Books.
- Singh, B. 2015. *Poverty and the Quest for Life: Spiritual and Material Striving in Rural India*. Chicago and London: University of Chicago Press.
- Smith, N. 2010. *Uneven Development: Nature, Capital, and the Production of Space*. 3rd. ed. London: Verso.
- Soper, K. 1995. *What is Nature?* Oxford: Blackwell.
- Spivak, G.C. 2003. *Death of a Discipline*. New York: Columbia University Press.
- Spivak, G.C. 2009. *Outside the Teaching Machine*. New York and London: Routledge.
- Stengers, I. 2010. *Cosmopolitics I*. Minneapolis: University of Minnesota Press.

- Strathern, M. 1988. *The Gender of the Gift*. Berkeley: University of California Press.
- Swyngedouw, E. 2013. 'The Non-Political Politics of Climate Change'. *ACME – An International E-Journal for Critical Geographers*. Vol. 12, No. 1. Pp. 1-8.
- Sundberg, J. 2014. 'Decolonizing Posthumanist Geographies' *cultural geographies* Vol. 21, No. 1, pp. 33-47.
- Suzuki, D. 2014. *The David Suzuki Reader*. Vancouver and Berkeley: Greystone Books.
- Thomas, A.C. 2015. 'Indigenous More-than-Humanisms: Relational Ethics with the Huruni River in Aotearoa, New Zealand'. *Social and Cultural Geography*. Vol. 16, Issue 8, pp. 975-990.
- Tsing, A.L. 2015. *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*. Princeton: Princeton University Press.
- Todd, Z. 2014. 'Decolonial Dreams: Unsettling the Academy Through Namewak'. in Ed. C. Picard, *The New [New] Corpse*. Chicago: Green Lantern Press.
https://www.academia.edu/10351713/Decolonial_Dreams_unsettling_the_academy_through_name_wak. [Accessed, 19.02.2016].
- Todd, Z. 2016. 'An Indigenous Feminist's take on the Ontological Turn: 'ontology' is just another word for colonialism'. *Journal of Historical Sociology*. Vol. 29, No. 1. March. Pp. 4-22.
- Wainwright, J. 2013. *Geopiracy: Oaxaca, Militant Empiricism, and Geographical Thought*. London: Palgrave.
- Walsh, C. 2010. 'Development as Buen Vivir: Institutional arrangements and (de)colonial entanglements', *Development* Vol. 53, No.1, pp. 15–21.
- Warren, K.J. 1997. *Ecofeminism: Women, Culture, Nature*, Bloomington: Indiana University Press.
- Watts, V. 2013. 'Indigenous Place-Thought and Agency Amongst Humans and Non-Humans (First Woman and Sky Woman Go On a European Tour!)' *Decolonization: Indigeneity, Education and Society*. Vol. 2, No. 1, 2013, pp. 20-34.
- White, D.F., A.P. Rudy, and B.J. Gareau. 2016. *Environments, Natures, and Social Theory*. London and New York: Palgrave.
- Whitehead, A.N. 1920. *The Concept of Nature*. Cambridge: Cambridge University Press.
- Wylie, J. 2006. 'Depths and Folds: on landscape and the gazing subject' *Environment and Planning D*, Vol. 24, pp. 519-535.
- Wynter, S. 2003. 'Unsettling the Coloniality of Being/Power/Truth/Freedom: Towards the Human, After Man, Its Overrepresentation – An Argument' *CR: The New Centennial Review*, Vol. 3, No. 3, pp. 257-337.