

# Materiality and the Ontological Turn in the Anthropocene: Establishing a Dialogue between Law, Anthropology and Eco-Philosophy

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## I. Introduction: the Crisis of the Anthropocene

One of the earlier editorial pieces of the *Journal of Human Rights and the Environment* opened with the quote of the American anthropologist Margaret Mead '[w]e won't have a society if we destroy the environment'.<sup>1</sup> Unfortunately, if we look into the evidence of biophysical signs, the threat of environmental breakdown is eminent,<sup>2</sup> and humanity's survival might indeed be under threat. Our ecological footprint on Earth is at such a scale that we find ourselves in a geological epoch called the Anthropocene,<sup>3</sup> characterised as it is by human terraforming of the Earth.<sup>4</sup> Our biosphere is sick and behaves like an infected organism; every living organism in the biosphere is declining. The evidence is increasingly clear: in a scientific study commissioned by the United Nations in 2005, it was reported that humans are responsible for the extinction of 50,000–55,000 species each year.<sup>5</sup>

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<sup>1</sup> K Morrow, 'Ontological Vulnerability: A Viable Alternative Lens through which to View Human/Environmental Relations' (2011) 2 *Journal of Human Rights and the Environment* 1, 1.

<sup>2</sup> A Grear, 'Multi level Governance for Sustainability: Reflections from a Fractures Discourse' (2010) 5 *Europe Institute Journal* 73, 88.

<sup>3</sup> See eg LJ Kotzé, 'Rethinking Global Environmental Law and Governance in the Anthropocene' (2014) 32 *Journal of Energy & Natural Resources Law* 121; LJ Kotzé, 'Human Rights and the Environment in the Anthropocene' (2014) *The Anthropocene Review* 1.

<sup>4</sup> E Fitz-Henry, 'Decolonising Personhood' in M Maloney and P Burdon (eds), *Wild Law – in Practice* (London, Routledge, 2014) 133–48.

<sup>5</sup> P Burdon, *Earth Jurisprudence and Earth Community* (Adelaide Law School, The University of Adelaide, 2011).

At the core of this environmental crisis lies the long held belief that humans consider themselves to be different from nature and nature is seen as a resource for human use and consumption. From a regulatory perspective, an intricate system of property rights has provided the tools to appropriate and commodify nature and increasingly, nature's landscapes and environments get caught up in market-based solutions.<sup>6</sup> This market-based and corporate-sponsored approach towards the protection of the environment is rooted in an anthropocentric understanding of nature and is vehemently opposed in the more critical circles of the humanities and social sciences, often under the banner of the posthuman condition.<sup>7</sup>

It is no different for law, which itself is perceived as being deeply anthropocentric and rotating around the *Anthropos* (conceptualised as human/man),<sup>8</sup> and as reducing all other forms of life to objects.<sup>9</sup> The central position of the human subject in the juridical order as both agent and beneficiary has been profusely problematised in critical legal scholarship.<sup>10</sup> The natural world has been reduced to a 'subaltern'<sup>11</sup> object, a process that has characterised nature as an 'exploited

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<sup>6</sup> S Sullivan, J Igoe and B Büscher, 'Introducing "Nature on the Move" – A Triptych' (2013) 6 *New Proposals: Journal of Marxism and Interdisciplinary Inquiry* 15, 15.

<sup>7</sup> Fitz-Henry, 'Decolonising Personhood' (n 4). Some of the scholarship on the posthuman condition Fitz-Henry refers to are (and this list is not exhaustive) eg J Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham, NC, Duke University Press, 2010); T Morton, *The Ecological Thought* (Cambridge, MA, Harvard University Press, 2010)

<sup>8</sup> V Plumwood, *Feminism and the Mastery of Nature* (London, Routledge, 1993); C Merchant, *The Death of Nature: Women, Ecology, and the Scientific Revolution* (New York, HarperCollins Publishers, 1980).

<sup>9</sup> A Grear, 'Deconstructing *Anthropos*: A Critical Legal Reflection on "Anthropocentric" Law and Anthropocene Humanity' (2015) 26 *Law Critique* 225.

<sup>10</sup> See eg A Philippopoulos-Mihalopoulos (ed), *Law and Ecology: New Environmental Foundations* (Abingdon, Routledge, 2011); P Burdon (ed), *Exploring Wild Law: The Philosophy of Earth Jurisprudence* (Kent Town, Wakefield Press, 2011); C Cullinan, *Wild Law: Manifesto for Earth Justice* (Totnes, Chelsea Green Publishing, 2011).

<sup>11</sup> G Spivak, *Death of a Discipline* (New York, Columbia University Press, 2003).

proletariat'.<sup>12</sup> As we find ourselves in what has been perceived as a new geological epoch, a human-centric worldview may no longer be tenable. Life as we know it can no longer sustain itself and global environmental change has introduced a new urgency to critical legal thinking and demands that 'normal' certainties are inverted, or even dissolved.<sup>13</sup> Extreme weather, volcanic eruptions, earthquakes, pollution and flooding have come to symbolise the sensitivity of Gaia, but planet Earth is also materially affected and the idea of some critical thinkers that we only have one Earth,<sup>14</sup> forces us to think about the ecology of the Anthropocene.<sup>15</sup>

In pursuit of such an endeavour, this chapter explores the challenges and opportunities of the Anthropocene for environmental law. Through a closer reading of anthropology and eco-philosophy, a new legal terrain is (re)discovered wherein the laws of nature dictate a new contract between living and non-living entities in the universe as an 'ultimate' attempt to save the Earth and all its living and non-living habitants. To this end, Part II below explores rights of nature from a historical perspective as a counter narrative to the commodification of nature. Parts III and IV discuss the material and ontological turn in anthropology respectively. Part V looks into representing alterity from an ontological perspective which is then further discussed in Part VI where anthropology is brought into conversation with law through a detailed reading of the work of the eco-philosopher Michel Serres. The final part of the chapter offers contemporary examples of rights of nature, which resemble some of the legal propositions that were discussed in the previous parts.

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<sup>12</sup> E Fitz-Henry, 'The Natural Contract: From Lévi-Strauss to the Ecuadorian Constitutional Court' (2012) 82 *Oceania* 264.

<sup>13</sup> T Morton, *Hyperobjects: Philosophy and Ecology after the End of the World* (Minneapolis, Minneapolis University Press, 2013).

<sup>14</sup> See eg B Latour, *A Cautious Prometheus: A Few Steps towards a Philosophy of Design (with Special Attention to Peter Sloterdijk)* (Keynote Lecture, Networks of Design meeting of the Design History Society, Falmouth, Cornwall, 3 September 2008) [www.bruno-latour.fr/sites/default/files/112-DESIGN-CORNWALL-GB.pdf](http://www.bruno-latour.fr/sites/default/files/112-DESIGN-CORNWALL-GB.pdf).

<sup>15</sup> MMJ Fischer, 'The Lightness of Existence and the Origami of "French" Anthropology: Latour, Descola, Viveiros de Castro, Maillasoux, and their so-called Ontological Turn' (2014) 4 *HAU: Journal of Ethnographic Theory* 331, 336.

## II. Counter Discourse

As a counter force to the principle of commodification and capitalisation of nature, Ecuadorian activists have lobbied and embraced a rights-based approach to nature.<sup>16</sup> In 2008, the Ecuadorian Constituent Assembly became the first juridical body in the world to legalise what Michel Serres called a ‘natural contract’;<sup>17</sup> a concept to which I return later in the chapter. With the assistance of the United States based Community Environmental Legal Defense Fund, representatives at the Assembly in July of 2008 rewrote their 1998 Constitution to include a landmark series of provisions delineating the rights of nature. While the world had to wait until 2008 to witness the constitutional materialisation of rights of nature, the French anthropologist Claude Lévi-Strauss already lobbied in 1976 in the French National Assembly for the recognition of the ‘rights of the living’.<sup>18</sup>

Lévi-Strauss’ vision was very much based around the idea that the centrality of the rights of people that were being debated in the Assembly had to be dismantled and displaced.<sup>19</sup> He argued that the concept of rights needed to encompass all living species. For Lévi-Strauss it was clear that humans had no right to wipe out whole ecosystems or species without charges that border on genocide. Yet, several years later we are still debating the viability of ecocide as a potential new crime in law.<sup>20</sup>

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<sup>16</sup> Fitz-Henry ‘The Natural Contract’ (n 12).

<sup>17</sup> M Serres, *The Natural Contract*, E MacArthur & W Paulson trans (Ann Arbor, The University of Michigan Press, 1995 [1990]).

<sup>18</sup> Fitz-Henry (n 12). A lengthier version of this speech at the National Assembly (1985) can be found in the concluding chapter of C Lévi-Strauss, *The View from Afar* (Chicago, Chicago University Press, 1992) 282.

<sup>19</sup> Lévi-Strauss, *The View from Afar* (n 18).

<sup>20</sup> In 2010, the proposal to amend the Rome Statute to include an international crime of Ecocide was submitted by Polly Higgins to the International Law Commission (ILC). The ILC is the UN body ‘mandated to promote the progressive development of international law and its codification’. The submission was published as chs 5 and 6 in P Higgins, *Eradicating Ecocide: Exploring the Corporate and Political Practices*

As an anthropologist immersed in local settings and other non-Western worldviews, Lévi-Strauss was particularly concerned about extending rights to all living species, including rocks and birds:

The right to life and to the free development of the living species still represented on the earth, is the only rights that can be called inalienable – for the simple reason that the disappearance of any species leaves us with an irreparable void in the system of creation.<sup>21</sup>

Lévi-Strauss saw his intervention at the French National Assembly as the ‘beginning of a new declaration of rights’.<sup>22</sup> One approach that has been widely advocated to embody to some extent the idea of the rights of nature, is a human right to a healthy environment.<sup>23</sup> Doubts are raised though if a human rights framework is sufficient to raise the principle of environmental protection to a higher level of ecological sustainability that recognises human obligations towards ecosystems and the environment as a foundational principle or *Grundnorm* of legal, political and social systems.<sup>24</sup> In the present worldview, the biosphere has no legal standing within human rights law and a non-negotiable ecological bottom line fails to materialise in what is essentially and to its core an anthropocentric human rights regime.<sup>25</sup> The issue of climate change has been trying to call us to attention and to move us into action, but as Anna Grear observes:

While we wrestle with epistemological quandaries and doubts concerning the best state of our knowledge and debate the best way forward, we are faced with a planetary crisis. The

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*Destroying the Planet and Proposing the Laws to Eradicate Ecocide* (London, Shephard-Walwyn (Publishers) Ltd, 2010).

<sup>21</sup> Lévi-Strauss (n 19) at 284.

<sup>22</sup> *ibid*, 284.

<sup>23</sup> A turning point for the relationship between human rights and environmental concerns came in 1972 with the introduction of a distinct human right to a healthy environment formulated first in Principle 1 of the 1972 Stockholm Declaration: ‘[m]an has the fundamental right to freedom, equality and adequate condition of life, in an environment of a quality that permits a life of dignity, well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations’.

<sup>24</sup> K Bosselmann, ‘Environmental and Human Rights in Ethical Context’ in A Grear and LJ Kotzé (eds), *Research Handbook on Human Rights and the Environment* (Cheltenham, Edward Elgar Publishing, 2015).

<sup>25</sup> Bosselmann, ‘Environmental and Human Rights in Ethical Context’ (n 24).

evidence is mounting: a multitude of material and bio-physical signs point to the threat of impending environmental breakdown.<sup>26</sup>

According to Grear, responding to planetary ontic limits seems beyond the reach of human rights language, despite its wider and powerful achievements: '[t]he anthropocentric limitations of the Western human rights tradition reinforces anthropocentrism as a form of grave ecological blindness'.<sup>27</sup> In practice, this means that environmental law needs to step up and provide adequate protection mechanisms for preserving nature and ecosystems. Unfortunately, environmental law has often been developed without taking into account the wider ethical context.<sup>28</sup> What is important within the context of the urgency of the Anthropocene is to embrace and think through the possibilities that could be developed if environmental law were to shift its focus to establish a more ethical and sustainable relationship between human cultures and non-human 'others'.<sup>29</sup> For present purposes, this means that environmental law should, among others, seek inspiration from other disciplinary theoretical debates about the relationship between culture and nature, by specifically reflecting upon the encounter between humans and non-humans and how this encounter has been theorised in anthropology and (environmental) continental philosophy and apply some of the thinking in these other disciplines to environmental law.

### III. Materiality

A dialogue needs to be established amongst different cultures how we – as a collective of human species – engage with the environment. The most compelling discourse on this matter resides in indigenous peoples' cultures and their worldviews,<sup>30</sup> a proposition that I will return to later. The cultural and legal milieu of indigenous

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<sup>26</sup> A Grear, 'Multi Level Governance for Sustainability: Reflections from a Fractures Discourse' (2010) 5 *Europe Institute Journal* 73, 88.

<sup>27</sup> Grear, 'Multi level Governance for Sustainability' (n 26) at 88

<sup>28</sup> Bosselmann (n 24).

<sup>29</sup> A Pelizzon, 'Earth Laws, Rights of Nature and Legal Pluralism' in M Maloney and P Burdon (eds), *Wild Law – in Practice* (London, Routledge, 2014).

<sup>30</sup> Pelizzon, 'Earth Laws' (n 29) at 177.

peoples' being and worldviews can provide novel cognitive insights into the materiality of the current environmental crisis and can become the conduit for taking the question of materiality to environmental law. A renewed focus on the material world offers a fresh look at what it means to be human and its relationship with the non-human world. The material world has for a long time been the central focus of actor-network theories in science and technology. Socio-cultural and philosophical anthropology have also experienced what has been labelled an ontological turn, with a renewed interest in the meaning of the material world. Explained in more detail later, the turn to ontology in anthropology is mainly associated with the work of Philippe Descola, Eduardo Viveiros de Castro and Bruno Latour.<sup>31</sup> Their scholarship has mainly been in reaction to their belief that the broad humanist linguistic turn in socio-cultural anthropology is ill-equipped to grapple with and confront the environmental and socio-ecological problems in the Anthropocene. What defines the Anthropocene is the entanglement of human and non-human conditions and futures, raising ethical and political questions that can no longer be treated as exclusively human problems.<sup>32</sup>

Kohn defines ontological anthropology as 'a non-reductive ethnographic exploration of realities' that is not socially constructed. The ontological turn in anthropology is in response to current ecological, existential, ethical and political problems.<sup>33</sup> These problems force us to think about human life in a world where the future of the human being is in danger. Consequently we also need to consider the kind of life and future that is beyond the human being, as it were.<sup>34</sup> The ontological turn follows on from a previous correlational turn in philosophy which, according to Quentin

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<sup>31</sup> E Kohn, 'Anthropology of Ontologies' (2015) 44 *The Annual Review of Anthropology* 311.

<sup>32</sup> *ibid.*

<sup>33</sup> *ibid.*, 315.

<sup>34</sup> *ibid.*

Meillassoux, has limited philosophy to the study of human thought and kept philosophy away from studying the 'great outdoors'; the world beyond human representation.<sup>35</sup>

In the troubling times of the Anthropocene, however, Latour<sup>36</sup> calls us to attention when he compares the apocalyptic collapse of Gaia<sup>37</sup> to the apocalyptic futurism of the Paraguayan Ayereó.<sup>38</sup> Gaia is perceived as the immunological reaction of the Earth;<sup>39</sup> for Latour, Gaia has the power to summon us in the same way as gods used to do. As the Earth is placed in a 'state of exception'<sup>40</sup>, it demands everyone to make decisions about life and death until a new political body emerges. Describing the condition of Gaia as a 'feverish form of palsy',<sup>41</sup> usefully summarises the need to acknowledge that the world is not just made up of signifying or discursive realities; there is something deeply material about the world.<sup>42</sup> Having been greatly entangled in discourses, or what Levi Bryant describes as the 'diacritical differences of the signifier', 'the real physical efficacy of fossil fuels, pollutants and automobiles'<sup>43</sup> has been overlooked. For too long, we have focused on the text instead of material factors; materiality has been lost and embedded in a socially constructed understanding of

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<sup>35</sup> Q Meillassoux, *After Finitude: An Essay on the Necessity of Contingency*, R Brassier trans (London, Bloomsbury, 2012); G Harman, *Quentin Meillassoux: Philosophy in the Making* (Edinburgh, Edinburgh University Press, 2015).

<sup>36</sup> B Latour, *An Inquiry into Modes of Existence: An Anthropology of the Modern* (Cambridge MA, Harvard University Press, 2013) quoted in Fischer, 'The Lightness of Existence' (n 15).

<sup>37</sup> Gaia is one of the Greek primordial goddesses and the ancestral mother of all life. Gaia is also an ecological term coined by James Lovelock in 1979. As a theory Gaia denotes that the Earth itself is viewed as a living organism with self-regulatory capacities and functions.

<sup>38</sup> Fischer (n 15) at 336.

<sup>39</sup> *ibid*, 336.

<sup>40</sup> C Schmitt, *Political Theology* (Chicago, University of Chicago Press, 2005 [1922]) quoted in Fischer (n 15).

<sup>41</sup> B Latour, *Facing Gaia: Six Lectures on the Political Theology of Nature* (The Gifford Lectures, University of Edinburgh, 18–28 February 2013) [www.bruno-latour.fr/node/487](http://www.bruno-latour.fr/node/487); [bruno-latour.fr/sites/default/files/downloads/GIFFORD-SIX-LECTURES\\_1.pdf](http://bruno-latour.fr/sites/default/files/downloads/GIFFORD-SIX-LECTURES_1.pdf), quoted in Fischer (n 15) at 80.

<sup>42</sup> Fischer (n 15).

<sup>43</sup> L Bryant, *Onto-Cartography: An Ontology of Machines and Media* (Edinburgh, Edinburgh University Press, 2014) ix.



cultural practices. As Bryant warns, reducing materialism to something that is cultural and discursive is not without analytical and political consequences. First, it makes physical agencies invisible; the power of ‘things’ or reality is reduced to an economic, linguistic or cultural representation. Acknowledging that reality can produce an effect beyond being a conduit for social relations has been labelled, at best, as a naïve approach.<sup>44</sup> Secondly, it has obscured our thinking and has paralysed our political actions to address climate change, among others: ‘[t]hinking climate change requires thinking ecologically and thinking ecologically requires us to think how we are both embedded in a broader natural world and how non-human things have power and efficacy of their own’.<sup>45</sup> Climate change forces us to think beyond symbolic representation since we are facing encounters with real materiality, with physicality. To this end it seems that a new vogue of an ontological turn is calling upon us.<sup>46</sup>

#### IV. Ontological Turn in Anthropology

Given that the entangled relationship between humans and non-humans is one of the most defining characteristics of the Anthropocene (Donna Haraway speaks of the Chthulucene),<sup>47</sup> anthropology may be the discipline par excellence that can inspire us how to study this relationship with non-humans, or the ‘Other’.<sup>48</sup> In anthropology,

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<sup>44</sup> *ibid.*

<sup>45</sup> *ibid.*, 4.

<sup>46</sup> *ibid.*, 4.

<sup>47</sup> Donna Haraway rejects the term ‘Anthropocene’ as the focus is still too much on the Anthropos and human beings are not the only important actors. Therefore, Haraway proposes the term Chthulucene as human beings are part of the Earth and the other biotic and abiotic powers of this Earth are the main story. See further DJ Haraway, *Staying with the Trouble, Making Kin in the Chthulucene* (Durham, Duke University Press, 2016). See also JW Moore (ed), *Anthropocene or Capitalocene: Nature, History, and the Crisis of Capitalism* (Oakland, CA, PM Press, 2016).

<sup>48</sup> W Edelglass, J Hatley and C Diehm (eds), *Facing Nature: Levinas and Environmental Thought* (Pittsburgh, Duquesne University Press, 2012).

thinking through and about difference is not done through our own (often Western) worldviews and perceptions; the other world (human and non-human) is experienced through the concepts and queries as understood by the 'Other'.<sup>49</sup> The great divide between nature and culture is not only questioned, but also transcended. To be sure, the recent ontological turn in anthropology has reinforced the importance of studying alterity.<sup>50</sup>

With this ontological paradigm shift, the question is no longer about understanding different cultures, or how people think about nature. As Kohn manages to capture eloquently in the title of his book, it is rather about understanding 'how forests think'.<sup>51</sup> Human *exceptionism* is questioned and a posthuman anthropology is proposed in which a multispecies ethnography is pursued, exploring the perspectives of non-human life forms and non-life forms.<sup>52</sup> The postcolonial question that Spivak asked a few decades ago: '[c]an the Subaltern speak',<sup>53</sup> is now extended to '[c]an the mosquito think',<sup>54</sup> or '[d]o glaciers listen?'.<sup>55</sup>

Christopher Stone asked a related question in 1972 when he questioned in *Should Trees Have Standing*,<sup>56</sup> if natural objects such as lakes and forests, could get the

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<sup>49</sup> L Bessire and D Bond, 'Ontological Anthropology and the Deferral of Critique' (2014) 41 *American Ethnologist* 440.

<sup>50</sup> Bessire and Bond, 'Ontological Anthropology' (n 49).

<sup>51</sup> E Kohn, *How Forests Think: Toward an Anthropology beyond the Human* (Berkeley, University of California Press, 2013) 7.

<sup>52</sup> Kohn, 'How Forest Think' (n 51).

<sup>53</sup> Spivak, 'Death of a Discipline' (n 11) at 24.

<sup>54</sup> T Mitchell, 'Can the Mosquito Speak?' in T Mitchell (ed), *In the Rule of Experts: Egypt, Techno-Politics, Modernity* (Berkeley, University of California Press, 2012) 19.

<sup>55</sup> J Cruikshank, *Do Glaciers Listen? Local Knowledge, Colonial Encounters, and Social Imagination* (Vancouver, University of British Columbia Press, 2005) 3. For more examples, see Y Orr, JS Lansing and MR Dove (2015) 'Environmental Anthropology: Systemic Perspectives' (2015) 44 *The Annual Review of Anthropology* 153.

<sup>56</sup> CD Stone, 'Should Trees Have Standing? – Toward Legal Rights for Natural Objects' (1972) 45 *Southern California Law Review* 450.

status of legal persons.<sup>57</sup> But while an anthropological understanding transcends the distinction between nature and culture or human and tree, law seems to limit legal personality to human species as the natural is placed outside the border of personality. Properly reflecting on the limits of law, this means that despite Stone's efforts to argue the opposite, nature and the environment remain property, and not persons, or at least rights-bearing entities for the purpose of law.<sup>58</sup>

This is where multispecies ethnographies have an advantage as they can provide a conceptual and methodological toolkit to de-centre traditional approaches to human agency and politics; the centrality and hegemonic position of the *Anthropos* is challenged and human and non-human relationships can be represented through other (non-human) perspectives.<sup>59</sup> As Kohn writes, '[t]his reach beyond the human changes our understanding of foundational analytical concepts such as contexts but also others, such as representation, relation, self, ends, difference, similarity, life, the real, mind'.<sup>60</sup> With the ontological turn, socio-cultural anthropology has managed to move on from its humanistic and linguistic background steeped in social construction. This puts ontological anthropology in a privileged position to conceptualise an epoch characterised by entanglements of human and non-human worlds and futures.<sup>61</sup> Ontological anthropology provides insights into how to study and acknowledge a multiplicity of actual worlds.<sup>62</sup> A (somewhat disparate) collective of avant-garde post-

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<sup>57</sup> CD Stone, 'Response to Commentators' (2012) 3 *Journal of Human Rights and the Environment* 3, 100, 100.

<sup>58</sup> N Naffine, 'Legal Personality and the Natural World: On the Persistence of the Human Measure of Value' (2012) 3 *Journal of Human and the Environment* 68, 69.

<sup>59</sup> See eg AL Tsing, *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins* (Princeton, NJ, Princeton University Press, 2015); DJ Haraway, *When Species Meet* (Minneapolis, University of Minnesota Press, 2008); R Braidotti, *The Posthuman* (Cambridge, Polity Press, 2013).

<sup>60</sup> Kohn (n 51) at 22–23.

<sup>61</sup> Kohn, 'Anthropology of Ontologies' (n 31) at 311–27.

<sup>62</sup> P Descola, 'Modes of Being and Forms of Predication' (2014) 4 *HAU: Journal of Ethnographic Theory* 271.

humanist thinkers<sup>63</sup> passionately expose, *once and for all*, the irrelevance of the culture–nature divide; the outmoded Western cosmological binary is transcended with euphoric contemporary entanglements.<sup>64</sup>

The twentieth-century epistemological turn is now succeeded with a new ontological turn that addresses both perspectivism (through Descola’s anthropology rooted in ethnology and Amazonian ethnography), and technology (through Latour’s Science and Technology Studies and technographic development of French philosophers of emergence).<sup>65</sup> Descola’s and Latour’s theoretical endeavours (often labelled as philosophical anthropology) are in close dialogue with Viveiros de Castro.<sup>66</sup> Each of these three theoretical framing – ‘foundational perspectivism’, ‘beyond nature and culture’ and ‘modes of existence’ – will be discussed further below.

## A. Foundational ‘Perspectivism’

When the work of the Brazilian anthropologist Eduardo Viveiros de Castro<sup>67</sup> was translated, the term ontology was introduced in the Anglo-Saxon anthropological canon.<sup>68</sup> Doyens in anthropology such as Marilyn Strathern,<sup>69</sup> Bruno Latour<sup>70</sup> and Roy

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<sup>63</sup> John Kelly has given an overview of these thinkers and classified them as those who focus on (1) multispecies ethnographies; (2) experimental scientific realism in Science and Technology Studies and Actor-Network Theory; (3) ethnographies of indigenous cosmologies; and (4) phenomenologically inflicted accounts of dwelling and material vitality. For more details, see JD Kelly, ‘The Ontological Turn: Where are we?’ (2014) 4 *HAU: Journal of Ethnographic Theory* 537.

<sup>64</sup> Kelly, ‘The Ontological Turn: Where are we?’ (n 63) at 359.

<sup>65</sup> J Kelly, ‘Introduction: The Ontological Turn in French Philosophical Anthropology’ (2014) 4 *HAU: The Journal of Ethnographic Theory* 259.

<sup>66</sup> Kohn (n 31) at 311.

<sup>67</sup> E Viveiros de Castro, ‘Cosmological Deixis and Amerindian Perpspectivism’ (1998) 4 *Journal of the Royal Anthropological Institute* 469; E Viveiros de Castro, *Cannibal Metaphysics* (Minneapolis, Univocal, 2014).

<sup>68</sup> A Salmond, ‘Transforming Translations (Part 2): Addressing Ontological Alterity’ (2014) 4 *HAU: Journal of Ethnographic Theory* 155.

Wagner,<sup>71</sup> clearly left their mark in Viveiro de Castro's work who advocated for a special kind of perspectivist cosmology of predation, cannibalism and reincarnation as a way to critique the distinction between nature and culture.<sup>72</sup> This type of cosmology is typical for Lowland Amazonia and inverts the Western or modern model of nature and culture: nature becomes the variable and culture is constant.<sup>73</sup>

Based on the many ethnographic observations and reflections in Amazonia, Viveiros de Castro develops an indigenous theory according to which, in very simple terms, the European claim that jaguars are not people is overturned because jaguars *are* people with their own communities and shamans. In essence, Amazonian perspectivism shows an alternative viewpoint of human and non-human entanglements.<sup>74</sup> Animals and people see themselves as people; the form of species is just merely a clothing or an 'envelope' hiding an internal human form.<sup>75</sup> Usually only trans-specific beings such as shamans, can see the internal form or spirit of the animal,<sup>76</sup> but in general terms animals are: 'an intentionality or subjectivity formally identical to human consciousness, materialisable, [...], in a human bodily schema concealed behind an

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<sup>69</sup> M Strathern, *Kinship, Law and the Unexpected: Relatives Are always a Surprise* (Cambridge, Cambridge University Press, 2005).

<sup>70</sup> R Wagner, *The Invention of Culture* (Chicago, University of Chicago Press, 1975).

<sup>71</sup> B Latour, 'Perspectivism: Type or Bomb?' (2009) 25 *Anthropology Today* 1.

<sup>72</sup> Salmond, 'Transforming Translations (Part 2)' (n 68) at 165.

<sup>73</sup> Descola contests Viveiros de Castro's multinaturalism-monoculturalism and cosmology of predation by showing contrasts among different Amazonian groups. For further details, see Fischer (n 15) and Bessire and Bond (n 49) at 442.

<sup>74</sup> Although Viveiros de Castro has developed his theory on the reflections of Amazonian encounters, he also gives examples of other cultures' perspectivism and cosmological transformism in other scholars' ethnographic accounts. Viveiros de Castro, *Cosmological Perspectivism in Amazonia and Elsewhere* (Masterclass Series 1, Manchester, HAU Network of Ethnographic Theory, 2012) 49–53.

<sup>75</sup> Viveiros de Castro, *Cosmological Perspectivism in Amazonia and Elsewhere* (n 75) at 48.

<sup>76</sup> It is important to note that perspectivism usually involves only those species that perform a symbolic or practical role in Amazonian cultures, such as the great predator who are the main rivals of humans and the main prey for humans. A fundamental aspect of perspectival inversions is the relative and relational statuses of predator and prey; Viveiros de Castro (n 75) at 53–54.

animal mask'.<sup>77</sup> Perspectivism offers law another view on personhood which is no longer an 'absolute, diacritical property' of some (elitist and chosen) species, but to occupy a point of view or to have personhood depends on the context and is a question of degree. In some Amazonian contexts, animals may have more agency than some humans and are therefore perceived to have the characteristics of a human rather than an animal. This does not mean that non-human personhood is a given fact; whether or not a specific species can be a prosopomorphic agent capable of affecting humans is always open-ended, dependent as it is on context and personal experience.<sup>78</sup> The context though is defined in Amerindian terms and cannot be imported ready-made from our own perspective.<sup>79</sup> The relevance of perspectivism for environmental law is that it offers the opportunity to go beyond an anthropocentric understanding of law as perspectivism clearly shows that the distinction between nature and culture is a Western point of view not shared in other worldviews, such as the Amazonian ones.

## B. Beyond Nature and Culture

Although the translation of the work of Viveiros de Castro has raised the awareness of an ontological turn in anthropology, Descola and his suspension of the category 'nature' as the basis of an anthropological enquiry about difference, provided the initial groundwork for an ontological turn.<sup>80</sup> Lévi-Strauss' work, focusing on native thoughts and worldviews as having merit in their own right, has influenced Descola and others. His legacy is even more radical when he argues that when anthropologists attempt to think through the thoughts of the 'Others', ontological properties of the universe can be revealed.<sup>81</sup> Descola shares with Lévi-Strauss 'an emphasis on broad ethnological comparison and the formalist insistence that the apparently infinitely diverse ways in

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<sup>77</sup> *ibid*, 48.

<sup>78</sup> *ibid*, 54.

<sup>79</sup> *ibid*, 54.

<sup>80</sup> Kohn (n 31) at 317.

<sup>81</sup> *ibid*, 316.

which people live in relation to others are the product of more finite ways of apprehending and constructing these relations'.<sup>82</sup> According to Descola, this means one can only understand others, human or non-human, through self-comparison. In practice this entails that there is only a certain form of ontological assumptions possible. If the 'Other' is understood in comparison to oneself, the 'Other' can be categorised according to their similar or dissimilar interiorities and dissimilar or similar exteriorities.<sup>83</sup> This leads to a categorisation of four possible worldviews, namely 'animism', 'naturalism', 'totemism' and 'analogism'.

Having similar interiorities and dissimilar exteriorities, is labelled by Descola as *animism*, which is perceived as an ideal type and can be found among many indigenous peoples in the Amazon and the boreal regions of North America. For the animist all beings are persons as their selfhood is comparable with that of human persons, and beings are differentiated by their exteriority. For example, for an animist, a shaman can become a jaguar when wearing canine teeth or other markers that make jaguars distinctive predatory beings. It is a psychic continuity that permits a movement across physical discontinuities.<sup>84</sup> Modern westerners distinguish themselves as *naturalists* as they assume dissimilar interiorities and similar externalities. What marks the difference is a unique interior. Nature is seen as an 'object' that is external to our subjective selves.<sup>85</sup> *Totemism* assumes that others have similar interiorities and similar exteriorities, and can be found amongst certain aboriginal societies in Australia. Distinctions between interiority and exteriority are broken down; what is important is the perception that humans and non-humans share the same world. The fourth worldview is labelled *analogism*, which is characterised by dissimilar interiorities and dissimilar exteriorities and historically was widely distributed in the Americas, Asia, Africa and Europe. Analogists distinguish themselves by creating local groupings among

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<sup>82</sup> *ibid*, 317.

<sup>83</sup> *ibid*, 317.

<sup>84</sup> *ibid*.

<sup>85</sup> *ibid*.

entities that do not seem to have a relation with each other in a quest to create order out of chaos.

Descola's categorisation has been criticised in anthropology,<sup>86</sup> but what can be distilled from his work is an awareness and acceptance that other, non-Western metaphysics exist and need to be recognised at the very least. Descola's work can help law to think beyond the impermeable boundary and distinction that has been created between nature and culture. He dismantles not only the binary thinking around the headings of nature and culture, but his work also allows a deeper rejection of binary thinking between universal and particular, objective and subjective, physical and social, fact and value, immanence and transcendence, body and mind, animality and humanity, and many more.<sup>87</sup> All these binaries play an important role in law for creating boundaries and for excluding some humans and non-humans from the law.

### C. Modes of Existence

Latour, in his writings on the Anthropocene, has potentially offered the most salient contribution to the ontological turn for law.<sup>88</sup> Latour forcefully argues that despite the Anthropocene putting humans centre stage and conceiving them as a force of nature, anthropology can no longer be just about humans. Drawing upon his earlier work on actor network theory (ANT), Latour argues that while ANT can contribute in making humans and non-human part of the same analytical framework, in order to value nature, other non-human voices should also be recognised. In other words, Latour pleads for the acceptance of 'other modes of existence' or ontologies.

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<sup>86</sup> eg Sahlins has criticised Descola for creating a form of anthropomorphism. For more details, see M Sahlins, 'On the Ontological Scheme of Beyond Nature and Culture' (2014) 4 *HAU: Journal of Ethnographic Theory* 281.

<sup>87</sup> P Descola, *Cosmological Perspectivism in Amazonia and Elsewhere* (Masterclass Series 1. Manchester, HAU Network of Ethnographic Theory, 2012) 45–46.

<sup>88</sup> See eg B Latour, *An Inquiry into Modes of Existence: An Anthropology of the Moderns* (Cambridge, MA, Harvard University Press, 2013).



Latour is particularly known for bringing nature into culture and culture into nature. His work has often been labelled as being part of the broad ontological turn, as it is linked to ANT and therefore perceived as a form of symmetrical anthropology. This means that we are dealing with a flat ontology which refuses to give priority to any one actor. The world consists of many different actors and agencies and none is more important than the other. ANT overcomes the mind–body dualism by assuming that everything is like minded, both in agency as matter.<sup>89</sup>

Studying encounters between humans and non-humans in science and technology studies, Latour has ‘discovered’ a sense of material worlds and social actions between humans and non-humans. According to Latour, any kind of knowledge, including legal knowledge, is not just abstract knowledge but is always part of society and its social fabrications and also has a material aspect.<sup>90</sup> Latour highlights the materiality of law through its engagement with space, archives, databases and forensic models.<sup>91</sup> For the purpose of law, the question remains: can law’s materiality also be extended to other forms of materiality such as pollution, flooding, earthquakes and climate change?

## V. Knowledge and Experience in the Anthropocene

The ontological turn described above is not without its critics,<sup>92</sup> but instead of engaging with some of these critiques – valuable as they may be – it is more useful for present purposes to distil the main points that unite the ontologists and then to use these as a starting point for the wider dialogue concerning the relationship between law and anthropology. Anthropology, maybe more than any other discipline, must accept and

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<sup>89</sup> Kohn (n 31).

<sup>90</sup> Latour, ‘An Enquiry into Modes of Existence’ (n 88).

<sup>91</sup> A Pottage, ‘The Materiality of What?’ (2012) 39 *Journal of Law and Society* 168.

<sup>92</sup> See eg Sahlins, ‘On the Ontological Scheme of Beyond Nature and Culture’ (n 86).

confront the crisis that the concept of the Anthropocene is bringing on. As a discipline, it has to face the challenge that the *Anthropos* can no longer be the central focal point (a point that has been made by Anna Grear)<sup>93</sup> and has been replaced by ideas such as the post-subjective, the posthuman and the post-plural.<sup>94</sup> Anthropocentric thinking is no longer fashionable, so out of the *Anthropos*' ashes something new has to emerge. The attack on the *Anthropos* is a symbol of a wider critique against epistemology and the way knowledge is represented. The linguistic turn of the 1980s and 1990s has been criticised because culture is seen as 'a realm of discourse, meaning and value [...] conceived to hover over the material world but not to permeate it'.<sup>95</sup> To counter cultural relativism, ontologists emphasise alterity (otherness) and radical difference, and distinguish themselves from earlier attempts to treat difference as a function of diverse ways of knowing and representing reality.<sup>96</sup> Instead, they accept and promote a variety of 'truths' about being and how the world is made. Embracing these other ways of being is not only perceived as a means to rescue anthropology in a posthuman world, but it is also thought that the ontological turn could come to the rescue of the planet and its life forms.<sup>97</sup> To summarise, as the cosmos is in a desperate state, the *Anthropos* needs to be rethought and the ontological turn in anthropology offers the scope to think beyond the human, and revive a radical alterity. This is not just a task for anthropology, but also for law, which will have to think and act upon its own need for an ontological turn (see the discussion further below).

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<sup>93</sup> A Grear, 'Deconstructing *Anthropos*: A Critical Legal Reflection on "Anthropocentric" Law and Anthropocene "Humanity"' 2015(26) *Law and Critique* 225–49.

<sup>94</sup> CB Jensen, *Ontologies for Developing Things: Making Health Care Future through Technology* (Rotterdam, Sense Publishers, 2010) quoted in Salmond (n 68); M Holbraad, 'Response to Daniel Miller's Review of Thinking through Things' *Material Worlds* (blog), 4 March 2007, [www.materialworldblog.com/2006/12/thinking-through-things/](http://www.materialworldblog.com/2006/12/thinking-through-things/), quoted in Salmond (n 68).

<sup>95</sup> T Ingold, *The Perception of the Environment: Essays in Livelihood, Dwelling and Skill* (London, Routledge, 2000) 340, quoted in Salmond (n 68) at 162.

<sup>96</sup> Salmond (n 68).

<sup>97</sup> P Heywood, 'Anthropology and What There Is: Reflections on Ontology' (2012) 30 *Cambridge Anthropology* 143, 146, quoted in Salmond (n 68).

The ontological turn must be interpreted as a clear reaction to the linguistic turn in anthropology and has been part of a wider turn in philosophy. The linguistic, representational, or what Quentin Meillassoux<sup>98</sup> has labelled 'correlational turn' is often associated with the work of Immanuel Kant, who shifted the focus from substance of the world to 'those conditions under which the humans know or represent the world'.<sup>99</sup> The reality of phenomena is socially constructed and is the product of 'contingent, and conventional contexts, be they historical, social, cultural or linguistic. The circular, reciprocal, coconstitutive nature of these constructions makes them language-like, regardless of whether the items related are explicitly treated as linguistic'.<sup>100</sup> In other words, the ontological turn also seeks to create an alternative understanding of language and semiology. Human language is perceived to be a sign, which in the Saussurean tradition<sup>101</sup> is treated simultaneously as having no direct connection to the object it represents and the meaning of the sign is also pre-fixed by 'a set of codified relations it has to other such signs in the system of signs'.<sup>102</sup> The Saussurean approach towards language distinguishes between the signs and the world to which these signs refer to without giving any thought how these gaps can be connected. In sum, language in the Saussurean tradition has created a dualism between representation and the actual world. However, if human reality is represented as language and social construction, we are confronted with the difficulty to conceptualise and represent 'that which is outside of language or culture'.<sup>103</sup> What the ontological turn in anthropology is ultimately challenging is 'to reconfigure [its] relationship to language [and] the ethnographic study of how humans communicate with a host of nonhuman beings in a world that is itself communicative but not symbolic or linguistic'.<sup>104</sup>

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<sup>98</sup> Meillassoux, 'After Finitude' (n 35).

<sup>99</sup> Kohn (n 31) at 314.

<sup>100</sup> Kohn (n 31) at 314.

<sup>101</sup> F de Saussure, *Course in General Linguistics* (LaSalle, IL, Open Court, 1986 [1916]), quoted in Kohn (n 68).

<sup>102</sup> Kohn (n 31) at 314.

<sup>103</sup> *ibid.*

<sup>104</sup> *ibid.*

Particularly, the work of the anthropologist Eduardo Kohn in the rainforest of Ecuador's Upper Amazon could provide us with insights into a series of different forms of communication that are representational but not language-like.<sup>105</sup> Kohn draws upon the work of the philosopher Charles Peirce<sup>106</sup> who, contrary to Saussure, has focused on the representation of what lies beyond the human, or in the words of Peirce, 'the outward clash'.<sup>107</sup> By focusing on the communicative processes between humans and non-humans outside the framework of *language* offers a new perspective on the relationship between the human and the non-human in a post-humanist world. Shifting the focus on the relationship between language and non-language representations has given anthropology the tools to *ecologise*.<sup>108</sup> It has allowed for anthropology to show that focusing on language and its properties as ways to represent the world has troubled our understanding of difference, context and commensurability, or the relationality between humans and non-humans *tout court*.

Encounters with other kinds of being make us aware that seeing, representing, and perhaps even knowing and thinking, are not exclusively human affairs. Representation is thus more than just linguistic and symbolic; representation can go beyond language and, by extension, beyond the human. Non-human life forms can equally represent the world. Nevertheless, for us humans, this concept is difficult to comprehend, as social theory has a very long history of conflating representation with language.<sup>109</sup> A poignant issue that emerges from the ontological turn in anthropology for (environmental) law is then to ponder how the world beyond language can be accessed and represented in law.

## VI. Law in the Anthropocene

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<sup>105</sup> *ibid* and Kohn (n 51).

<sup>106</sup> CS Peirce, 'Logic as Semiotic: The Theory of Signs' in J Buchler (ed), *Philosophical Writings of Peirce* (New York, Dover, 1955) quoted in Kohn (n 31).

<sup>107</sup> W Keane, 'Semiotics and the Social Analysis of Material Things' (2003) 23 *Language Communication* 409 in Kohn (n 31) at 315.

<sup>108</sup> Kohn (n 31) at 315.

<sup>109</sup> Kohn (n 31) and Kohn (n 51).

By way of summary, the ontological turn in social and cultural theory shows that language plays an important role in representation and realisation of knowledge; but critically, it also obscures the world and prevents direct access to experience. This occurs against the backdrop of the Anthropocene, which calls for a renewed interest in how bodies sense environments and events, including ‘activities which cannot be captured with words but have a material existence on and beyond the boundaries with language and knowledge’.<sup>110</sup>

Critical environmental law may be particularly receptive to an ontological turn.<sup>111</sup> Environmental law has been for too long dislodged from reality; a reality which is currently vividly explicated by the Anthropocene. As is widely accepted, (environmental) law is deeply entwined with anthropocentrism to the extent that it treats nature as objects. Although more recently nature, and particularly animals, may be treated as legal subjects, this subjectivity or legal personhood is still very different from that of humans and it is language that plays a crucial role in this distinction.<sup>112</sup> The language in which environmental law has to express itself or communicate its intentionality needs a radical shift. A promising start has been made within the wider debate of critical environmental law. Andreas Philippopoulos-Mihalopoulos has proposed useful interventions, which resonate with my suggestions for a legal ontological turn. As he argues:

[T]he task of a critical environmental law is to work along its connection with ecology, indeed within this open ecology of disciplinary and ontological fluidity, and construct a new language in order to communicate about this new home. The challenge is multiple, not least because this language can no longer be ‘just’ a language but rather a performance of wholehearted embracing of materiality. It is not coincidental that environmental law is the most readily

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<sup>110</sup> I Tucker, ‘Sense and the Limits of Knowledge: Bodily Connections in the Work of Serres’ (2011) 28 *Theory, Culture & Society* 149.

<sup>111</sup> A Philippopoulos-Mihalopoulos, ‘Epistemologies of Doubt’ in Gear and Kotzé, ‘Research Handbook on Human Rights and the Environment’ (n 24) at 28.

<sup>112</sup> R Youatt, ‘Interspecies Relations, International Relations: Rethinking Anthropocentric Politics’ (2014) 43 *Millennium: Journal of International Studies* 207.

available means to drag law outside its linguistic ivory tower and land it on the material, the social, the corporeal, the gendered, the spatial, the animal, the molecular.<sup>113</sup>

Acknowledging that environmental law is self-destructive as it exudes considerable violence against the environment (often expressed through its anthropocentric character), one of the main interpolations Philippopoulos-Mihalopoulos proposes for environmental law is to de-individualise the individual and to de-centre the human in an ecological field that goes beyond an anthropocentric and ecocentric dualism. He draws upon critical autopoietic theory to rescue environmental law from its own paradox(es). He brings Luhmann's theory of autopoietic systems into conversation with post-ecological and posthuman understandings of law drawing upon, among others, Deleuzian and feminist thoughts, but also includes some reflections about new material and object-oriented ontologies. Whilst Philippopoulos-Mihalopoulos engages with Luhmann's autopoietic theory,<sup>114</sup> I am particularly interested in the ontological turn in anthropology to create a better understanding about the role *alternative* semantics may play in bringing back materiality into the law. As Philippopoulos-Mihalopoulos argues, the non-recognition or exclusion of various non-human and non-linguistic positions in (environmental) law has contributed to the distinction between citizens and non-citizens, humans and subalterns, and the natural and artificial.<sup>115</sup> Ultimately, the rejection of posthuman and non-linguistic positions has a major impact upon law and lawmaking and leads to instances of injustice and environmental destruction. So far, (critical) environmental law has not reflected how anthropology and its interest in biosemiotics<sup>116</sup> or non-human linguistic signs can help in developing a more inclusive

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<sup>113</sup> A Philippopoulos-Mihalopoulos, 'Looking into the Space between Law and Ecology'. A Philippopoulos-Mihalopoulos (ed), *Law and Ecology New Environmental Foundations*. (Abingdon, Routledge, 2011) 3.

<sup>114</sup> A Philippopoulos-Mihalopoulos, 'Critical Autopoiesis and the Materiality of Law' (2014) 27 *International Journal of Semiotics Law* 389.

<sup>115</sup> *ibid*, 406.

<sup>116</sup> Barbieri defines biosemiotics as the synthesis of biology and semiotics, and its main purpose is to show that semiosis is a fundamental component of life, ie that signs and meaning exist in all living systems. For more details, see M Barbieri, 'A Short History of Biosemiotics' (2009) 2 *Biosemiotics* 221; J Hoffmeyer, *Signs of Meaning in the Universe*, BJ Haveland trans (Bloomington, IN, Indiana University Press, 1996); J Hoffmeyer, *Biosemiotics: An Examination into the Signs of Life and the Life of Signs*, J Hoffmeyer and D Favareau trans (Scranton, University of Scranton Press, 2008).

form of environmental law that can regulate in a more ethical way the relationship between humans and non-humans.

What defines the Anthropocene is not so much the centrality of the *Anthropos* in creating a new epoch but, in the words of Latour, what makes the Anthropocene distinctive is that '[t]he Earth has become – has become again! – an active local, limited, sensitive, fragile, quaking, and easily tickles envelope'.<sup>117</sup> Typical for Latour, this raises the issue what kind of agency can be attributed to this new Earth. The question of agency takes us to the core of a classical legal distinction between subject and object. Whilst previously the Earth was a subject dictating its natural laws to humankind, in the Anthropocene the Earth has been reduced to an object; it is trembling and shaking because of human interventions. Humans are no longer left at the mercy of the trembling of the Earth, as we are now responsible for disturbing its autonomy.<sup>118</sup> Ultimately what defines the Anthropocene is that both Earth and humans have lost their status as subject, both have become objects and are forced together in their loss of being able to act autonomously; they are both doomed to share agency with other subjects that have lost their freedom to act. This also means that what previously was deemed impossible in the ontology of science to be both subject and object, the Anthropocene has blurred the boundaries between subjects and objects.<sup>119</sup>

As a consequence, dreams of human mastery over Earth have to be abandoned; a proposition that has repercussions for law and how law treats nature. The urgency of the Anthropocene no longer allows us to reduce nature and the Earth to our object; to share agency with the Earth means that we may have to question the presumption that we humans occupy an exceptional position in law because of our linguistic freedom. This is where the conversation between anthropology and law may contribute to a new understanding that humans no longer occupy a special place in law based on their linguistic skills. As Hoffmeyer argues:

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<sup>117</sup> B Latour, 'Agency at the Time of the Anthropocene' (2014) 45 *New Literary History* 4.

<sup>118</sup> Serres, *The Natural Contract* (n 17).

<sup>119</sup> Latour, 'Agency at the Time of the Anthropocene' (n 117) at 3; Serres (n 17) at 86.

The needs of all living beings for expressing a degree of anticipatory capacity is seen as an evolutionary lever for the development of species with increased semiotic freedom. Human intentionality is not therefore unique in the world but must be understood as a peculiar and highly sophisticated instantiation of a general semiotics of nature. Biosemiotics offers a way to explicate intentionality naturalistically.<sup>120</sup>

As the Anthropocene is the epoch that subverts and mixes objects and subjects, the meaning of the world is no longer just an expression of language. The Anthropocene requires an ontological proposition to semiotics. The world, the Earth, the cosmos and the universe need to be understood in themselves and are not only a feature of representation through the language about the world, the Earth, the cosmos and the universe. They have meaning in their own sense; existence and meaning are synonymous and as long as all agents act, they have agency. Law, just like any other system, has captured, translated and morphed agency into speech. Yet, as Amazonian examples of communicative encounters have shown so aptly,<sup>121</sup> not everything in the world is a matter of discourse in the sense of a speech act. The possibility of discourse resides in every agent looking for its existence. As the Anthropocene shows us so

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<sup>120</sup> J Hoffmeyer, 'The Natural History of Intentionality, A Biosemiotics Approach'. *The Symbolic Species* (2012) 6 *Biosemiotics* 97.

<sup>121</sup> What Kohn shows in his accounts of Amazonian encounters is that thinking is not circumscribed by language, the symbolic or the human. Reflecting upon a hunting expedition he witnessed, Kohn records in detail how monkeys fled high up in palm trees when a hunter failed to kill them. He describes subsequently how the hunter was first imitating the sound of a falling tree before he actually felt down the tree, but the monkey reacted already to the before-the-fact imitation, she took the imitation of a felling tree as a sign that could shake the monkey out of its security. According to Kohn the monkey perceived the sound of the shaking perch as a sign of danger, for Kohn the monkey's reaction to the moving perch was not a mechanical reaction of cause and effect. The monkey was able to connect the sign of the trembling perch as something dangerously different from the present sense of security: the branch could break off, a jaguar might be climbing up the tree, but something is going to happen and the monkey felt she had to do something about it; the sign of the shaking branch provided information to the monkey to make a connection between what was currently happening and what might potentially happen, the sound and the movement of the shaking branch gave the monkey information about an absent future and she reacted accordingly. For more details, see Kohn (n 51) at 27–71.



dramatically, storytelling is no longer the prerogative of human language; being thrown in the world is by itself already a story that is fully articulated and active.<sup>122</sup>

The French eco-philosopher Michel Serres, whose work is dedicated ‘to (re-)connect the modern subject to the universe and to (re-)discover his or her small place in the larger biotic community of life’,<sup>123</sup> provides insights in how to capture the materiality of the human condition, and shows the opportunity that can be created for law when the distinction between objects and subjects is blurred. Serres explores ‘what it means for a sentient being to be tossed into the chaos of existence with other particles of matter in a complex, interdependent, and interconnected cosmic network’.<sup>124</sup> In his book, *The Five Senses: A Philosophy of Mingled Bodies*,<sup>125</sup> Serres returns to the role of the body which expresses ‘the primary materiality of the human condition, through which we feel, touch, taste and see the world’.<sup>126</sup> Serres is critical of traditional empiricism since he believes it shades the senses and may have influenced how we have conceptualised knowledge.<sup>127</sup> Through the rich world of sense, experience can be produced and knowledge can no longer be reduced to individual bodies or language.<sup>128</sup> Senses allow getting closer to the experience of the everyday life, something that cannot be achieved through language as the latter can only mediate knowledge and cannot provide direct access to experience.<sup>129</sup> In the poetic words of Serres:

Since the beginning of our history, the global and the local world – from the glory of the heavens down to its smallest details and folds, furrows, marshy places and small pebbles – has slumbered beneath the waters of language, inaccessible and swallowed up like the great

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<sup>122</sup> Latour (n 117) at 14.

<sup>123</sup> Tucker, ‘Sense and the Limits of Knowledge’ (n 110) at 149.

<sup>124</sup> *ibid*, 150.

<sup>125</sup> M Serres, *The Five Senses: A Philosophy of Mingled Bodies*, M Sankey and P Cowley trans (London, Continuum, 2008).

<sup>126</sup> Tucker (n 110) at 156.

<sup>127</sup> *ibid*.

<sup>128</sup> *ibid*.

<sup>129</sup> *ibid*.

cathedral. No-one could go to the object without passing through it, just as no-one gathers seaweed, without, in some unimaginable space, getting his arm wet.<sup>130</sup>

Serres' oeuvre shows that the origin of language lies in the rhythms and calls of the natural world.<sup>131</sup> Through a deeply poetic engagement, he manages to capture the fragility and beauty of the Earth.<sup>132</sup> Serres' attempts to rethink the relationship between humanity and the rest of the universe through expressing the ontological principles that govern the universe and the existence of all living and non-living creatures is poignant, especially now that the Earth is facing one of its most epic challenges. Serres' biosemiotics also challenge and shape our understanding of the existence of the non-human world.<sup>133</sup> The field of biosemiotics shows that signification<sup>134</sup> is not limited to the human (of which Kohn's examples of Amazonian semiotic interactions between humans and non-humans are representative examples). Serres' narrative of the universe 'affords a way to revitalize the hitherto anthropocentric notion of narrative identity at a moment when solutions to the most important global questions must increasingly surpass the bounds of narrowly human and cultural worlds'.<sup>135</sup> In the Anthropocene, a desire awakens to understand the relationality through which individuals and bodies are produced; focus shifts from the meaning of words to the

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<sup>130</sup> Serres, (n 125) at 342.

<sup>131</sup> C Watkin, 'Michel Serres' Great Story: From Biosemiotics to Econarratology' (2015) 44 *SubStance* 171.

<sup>132</sup> Tucker (n 110) at 413.

<sup>133</sup> Watkin, 'Michel Serres' Great Story' (n 131) at 171.

<sup>134</sup> As Kohn explains, linguistic representation (or signification) is based on signs that are systematically related to one another, and arbitrarily related to their objects of reference. But drawing upon the work of Charles Peirce, Kohn shows in his work that conventional signs which are usually human representational forms and whose properties make human language possible, are actually linked to other ways of representation such as iconic signs (these are signs that share a likeness with the things they represent) or are indexical (these are signs that are affected or correlate with the things they represent). It is these other symbolic modalities (iconic and indexical) that are shared with non-humans. So while human language may represent conventional signs, Kohn through his ethnographic encounters in the Amazon and drawing upon the work of Charles Peirce, shows that there are two other ways of signification (indexical and symbolic) that are permeating the living world and are shared between humans and non-humans. For more details, see Kohn (n 51).

<sup>135</sup> Watkin (n 131) at 171.

material existence of bodies. Bodies signify not only the material existence beyond language, but also encompass the relations and intricate networks between multiple material forms in the world.<sup>136</sup> Inspired by the theoretical underpinnings of the science and technology movement, Serres seeks to re-empiricise social and cultural theory, but his turn to bodies and senses should not be understood as a return to a phenomenological embodied experience, as these are still limited to a signification and representation in which language plays a dominant force. In essence, senses must be freed from this meaning.

As argued throughout this chapter, the first step towards an ontological turn in (environmental) law is to experiment how to understand the non-human world. Crucial in this endeavour is for law to find a way to go beyond the old dichotomous thinking of nature versus culture. After all, it is such Cartesian thinking that has been held accountable for the current socio-ecological crisis. While Amazonian encounters between humans and non-humans may provide insights on how to achieve conversations between humans and non-humans, they are context specific and therefore will not travel easily to a Western context. This is not to say that the dialogue that was set up in this chapter between anthropology and law has been fruitless. On the contrary, it offered us a platform from which to start thinking that human language is not the only way to represent the world. This means that law is not just language; nature dictates laws through its natural processes. Biosemiosis may be precisely the tool that could (re)-acquaint the discourse of law with its materiality. As environmental law deals with pollution, climate change, flooding, drought and ecological disasters, it is automatically exposed to its own materiality; environmental law has a material presence.<sup>137</sup> Therefore law not only needs to deal with the continuum between humans and non-humans, it also needs to find its own materiality; or to put it differently, law needs to claim its own sensory presence.<sup>138</sup>

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<sup>136</sup> Tucker (n 110) at 434.

<sup>137</sup> Philippopoulos-Mihalopoulos, 'Epistemologies of Doubt' (n 111) at 42.

<sup>138</sup> *ibid*, 404.

This is where Serres' narratology may become a useful 'instrument' to challenge and shape the way law understands the non-human world and the relationship between humans and non-humans. Serres has developed what he calls a *Grand Récit* (the Great Story) of the universe as a way to develop a new non-anthropocentric humanism.<sup>139</sup> For Serres, humanity derives its identity from its place in the universal narrative of the Great Story, and not from any biological or psychological specificity that highlights the difference between humans and non-humans. Next, Serres pulls the human further into the story that it shares with the rest of the universe. Serres identifies four moments in the Great Story that leads to the existence of human beings, but what is remarkable is that Serres tells the story through an inversed ordering, where each event is more ancient than the last. The first event takes us back millions of years when *homo sapiens* emerged on the planet. The second event is the emergence of life on Earth,

from the first RNA (ribonucleic acid) with the capability to duplicate itself, through the three billion of years when bacteria were the dominant life-form, to the explosion of multi-cellular organisms recorded in the Burgess shale and the huge proliferation of orders, families, genera and species.<sup>140</sup>

The third event travels back from biology to astrophysics and the formation of material bodies or matter in a young universe that was still expanding and cooling. The last and most distant event is 'the birth of the universe itself, the origins of the origins'.<sup>141</sup> What is the relevance of these stories in terms of discrediting the nature-culture divide and what can it tell us about the role of law in the Anthropocene?

Serres answers the first part of this question during an interview in the *Cahier de l'Herne*, when he argues that understanding humanity in the context of the Great Story, allows us to get a new sense of culture that can be traced back not only to Greek and Mesopotamian civilisations, but in fact 15 billion years ago. The Great Story also highlights that the universe can 'write' its own story through its physical presence and the rhythms of its natural processes. The story of the universe is much older than the act of writing, which was discovered some 4000 years ago. Critics or sceptics may argue

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<sup>139</sup> Watkin (n 131) at 171.

<sup>140</sup> *ibid*, 173.

<sup>141</sup> *ibid*.

that no matter how far you go back with the story, it still needs to be told by humans for humans, as a result of which the non-human simply gets ventriloquised. Serres, however, argues that this is incorrect because nature is recounted by nature; for Serres semiotics is natural as all life – and beyond – receives, processes, stores and emits information; there is no ontological difference between crystals, plants, animals and the order of the world. The world does not need to wait for the arrival of the human to tell its story; things can ‘write autobiographically’.<sup>142</sup> For the logic of Serres’ argument to work, the story of the rhythms and events of nature are not modelled on a human syntactic prose. Human storytelling is just an expression of a much broader phenomenon. For Serres, writing human stories is a metonym of the story like the world: ‘I write like the light, like a crystal or like a stream’.<sup>143</sup>

The eco-narratives of Serres should not be perceived as metaphorical extensions of human storytelling. On the contrary, they embody a move from metaphor to metonymy. Human storytelling should not be used as a yardstick against which all other narratives are measured. For Serres, eco-narratives point out that narratives are not just for humans; nature seizes our claim of using language as an exclusivity to represent the world. This means that a narrative identity extends well beyond the *Anthropos*. Serres’ Great Story also offers us valuable insights into the role of law and the institutional model that can govern in the Anthropocene. Even though the Anthropocene originated as a geological epoch of a new Earth period, it is above all an ethical and normative concept; it is an epoch that demands a new form of governance and law.<sup>144</sup>

In his seminal work, *le Contrat Naturel*,<sup>145</sup> Serres, inspired by Jean-Jacques Rousseau’s social contract, argues that the only way to save the planet and by extension our own species, requires a paradigm shift that ultimately redefines the relationship

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<sup>142</sup> Serres (n 17) at 39.

<sup>143</sup> Watkin (n 131) at 175.

<sup>144</sup> K Jens, ‘The Enjoyment of Complexity: A New Political Anthropology for the Anthropocene?’ in H Trischler (ed), ‘Exploring the Future of the Age of Humans’ (2013) 3 *RCC Perspectives* 41.

<sup>145</sup> Serres (n 17) at 35.

between human beings and the rest of the universe. In his distinctive style, Serres holds humans accountable for waging a war against the planet with an arsenal of homocentric logic, scientific discoveries and technological advances. One of the ethical imperatives that Serres develops is the parasite,<sup>146</sup> a trope he uses to remind us that ‘a parasite with an insatiable appetite for consumption inevitably destroys its host, thereby preparing its own disappearance’.<sup>147</sup> Serres refers to another trope of mastery to prompt us that we should stop ‘attempting to master every last material particle for the exclusive benefit of humanity’.<sup>148</sup> Instead, Serres proposes that we develop a partnership – a natural contract – with the universe as a way to emphasise that as a species we are interdependent.<sup>149</sup>

Serres argues that at the basis of our civilisation lies the social contract that we humans signed as a collective, and that allowed us to leave the state of nature before there was a state.<sup>150</sup> As Hobbes argued, humans are poor creatures and ‘life of man’ in its natural state was ‘solitary, poor, nasty, brutish, and short’.<sup>151</sup> In the state of nature everyone was at war with everyone and in the quest for the good life and for fear of dying, humanity formed the state and signed a contract to protect its own self-interest.<sup>152</sup> The social contract had far-reaching implications for the relationship between humans and nature as we placed ourselves at the centre, as the masters of nature. In his own typical style, Serres uses stories and examples of pollution, possession, dirt and mastery as powerful tropes to make the point that humanity has placed itself at the centre of all things:

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<sup>146</sup> Serres has devoted a whole book on the parasite: M Serres, *The Parasite*, LR Schehr trans (Minneapolis, University of Minnesota Press, 2007).

<sup>147</sup> K Moser, ‘The Eco-philosophy of Michel Serres and J.M.G. Le Clézio: Launching a Battle Cry to Save the Imperiled Earth’ (2014) 21 *Interdisciplinary Studies in Literature and Environment* 413.

<sup>148</sup> *ibid*, 416.

<sup>149</sup> *ibid*.

<sup>150</sup> Serres (n 17) at 34.

<sup>151</sup> T Hobbes, *Leviathan, or The Matter, Forme, & Power of a Commonwealth Ecclesiasticall and Civill* (London, Penguin, 1985 [1651]) in Jens, ‘The Enjoyment of Complexity’ (n 144) at 50–51.

<sup>152</sup> Jens (n 144) at 51.

Let's have lunch together: when the salad bowl is passed, all one of us has to spit in it and it's all his, since no one else will want any more if it. He will have polluted that domain and we will consider dirty that which, being clean only to him he now owns. No one else ventures again into the places devastated by whoever occupies them in this way. [...] A living species, ours, is succeeding in excluding all the others from its niche, which is now global: how could other species eat or live in that which we cover with filth? If the soiled world is in danger, it's the result of our exclusive appropriation of things.<sup>153</sup>

The contract we signed that allowed us to leave the state of nature to form society was silent about the natural world; the pact that was signed neglected nature.<sup>154</sup> Natural law as perceived by the Enlightenment philosophers, was the law of reason and reason governs everyone; natural law was universal and followed human nature, which was reduced to either reason or history.<sup>155</sup> The natural law of reason nullified the natural law of nature.<sup>156</sup> Human reason conquered nature through a system of property rights; nature was possessed and pronounced as an object of the law. Initially only civilised *men* could be legal subjects, but progressively the definition of legal subjects has broadened and over time, women, indigenous peoples and other poor and marginalised groups were given the status of legal subject. The social contract became more of a completed project, but nature that gave us food, shelter, heat and water never became a legal subject. In the Anthropocene, nature writes back and (re)claims its legal status as subject. As humans have abused nature, nature threatens or has already taken away our food, shelter, heat and water.

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<sup>153</sup> Serres (n 17) at 33.

<sup>154</sup> *ibid*, 34.

<sup>155</sup> *ibid*, 35.

<sup>156</sup> It is beyond the scope of this chapter to give an in-depth analysis of natural law theory and the different schools of thinking within this tradition. However, it is useful to highlight the work of Henry Veatch and his contemporary reconstruction of Thomas Aquinas' theory and the Aristotelian tradition. Veatch argues that the ontological route provides insights and forms the basis for Aristotelian and Aquinian moral theory. Veatch sets out that an adequate foundation for moral theory is a viable ontology based on natural philosophy or an Aristotelian physics. Veatch is critical of the transcendental turn in legal philosophy and disagrees with the Finnis-Grisez argument that nature can never provide the support for ethics and morality. For more details about this debate, see AJ Lisska, *Aquinas's Theory of Natural Law: An Analytical Reconstruction* (Oxford, Clarendon Paperbacks, 1996).

Descartes' philosophy of bifurcation (nature versus culture) has left us now with the choice of either death or symbiosis. With a relentless passion, Serres urges us to master our mastery.<sup>157</sup> If our mastery is left unregulated, we will turn against ourselves:

former parasites have to become symbionts; the excesses they committed against their hosts puts the parasites in mortal danger, for dead hosts can no longer feed or house them. When the epidemic ends, even the microbes disappear, for lack of carriers for their proliferation.<sup>158</sup>

The only way that we can prevent from destroying the Earth – and ourselves – is by signing a contract with nature.<sup>159</sup> Law is the institution that can limit a one-sided parasitic action.<sup>160</sup> In order to (re)-discover the Earth we have to taste, touch, feel, smell and hear a cosmos to which everything is linked.<sup>161</sup> For the universe as our host to become our symbiont, we need to be in tune again with the world, the worldly and the physical. We need to go back to nature.<sup>162</sup> But Serres poses the questions: '[w]hat language do the things of the world speak, that we might come to an understanding with them, contractually?'<sup>163</sup> The answer lies in the way Earth *speaks* to us, 'in terms of forces, bonds, and interactions, and that's enough to make a contract'.<sup>164</sup>

If nature is a subject and no longer an object, it can sign a legal contract, and the language of the contract is scripted in the rhythms of nature, the Earth. Serres gives the example of the floods of the Nile as a sign or rhythm of property law:

EGYPT'S WAY. The first laws on Earth. Given normal weather, the Nile's floods submerged the borders of tillable fields in the alluvial valley fertilized by the great river. At the return of low water, royal officials called *harpedonaptai*, who were surveyors or geometers, measured anew the land mixed with mud and silt to redistribute or attribute its parts. Life got going again. Everyone went home to get back to work.<sup>165</sup>

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<sup>157</sup> Serres (n 17) at 34.

<sup>158</sup> *ibid*, 34.

<sup>159</sup> *ibid*, Moser, 'The Eco-philosophy of Michel Serres and J.M.G. Le Clézio' (n 147).

<sup>160</sup> Serres (n 17) at 36.

<sup>161</sup> Moser (n 147) at 430.

<sup>162</sup> Serres (n 17) at 38.

<sup>163</sup> *ibid*, 39.

<sup>164</sup> *ibid*.

<sup>165</sup> *ibid*, 51.



Flood thus influences laws of property. Floods take away previous measurements of parcels; 'it takes the world back to disorder, to primal chaos, to time zero, right back to nature'.<sup>166</sup> Laws of nature make decisions and divide the fields, and while the legislator may dictate and apply the law, the origins lie in the force and rhythms of nature. The birth of law lies in nature; the redistribution is in the hands of the *harpedonaptai* who give birth to a new law that uses the technology of geometry to divide the land.<sup>167</sup>

## VII. Conclusion

This chapter attempted to establish a dialogue with those disciplines that have embraced more fully than law has managed to do, the continuum between culture and nature, and consequently a return to the material world. A closer reading of the ontological turn in anthropology and a conversation with the eco-philosophy of Serres has shown us the need to urgently return to the laws of nature, albeit in a very different way than classical natural law, which considers nature our host and not our symbiont.

The Anthropocene and its material expression of climate change, environmental destruction and loss of biodiversity, to name a few, have made nature and the Earth a legal subject again. Nature is no longer just material for appropriation. While law has tried to limit the abusive parasitism of human beings through social contracts, the same action of a contractual obligation to curb parasitism has not yet been applied to the relationship between nature and humans. The sustained reason that has been used to justify politics and law as exclusive human activities still rests on the uniqueness of human language. The missing capacity for language imposes an objectivity to nature and deprives nature of any legal subjectivity. As nature lacks language, it cannot reason

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<sup>166</sup> *ibid.*

<sup>167</sup> *ibid.*, 52.

order through speech as a substitute for violence, and nature thus remains in a state of violence and excluded from political and legal life.

This chapter has shown that there are other ways of signification than just through language. Nature has its own way of complicated and unique ways of signification. Accepting non-linguistic representations as a form of signifying practice, opens up new possibilities for extending sovereignty beyond the state and the relationship with the human. As argued in this chapter, the Anthropocene is characterised by the blurring of boundaries between humans and non-humans, and between legal subjects and objects. The Anthropocene forces us to think more along the lines of a continuum, but this also has consequences for the concept of sovereignty. Sovereignty is no longer a political or legal concept that can only be attributed through language or human species. As Youatt shows:

if we consider what sovereignty looks like from the perspective of other animals, we see that they encounter human polities on their own semiotic terms – a wolf-pack cannot recognise a nation-state as sovereign in a formal or declarative way, but it can recognise human markers of territoriality, make judgments about insiders and outsiders, and assess threats to its way of life on which it acts. ...The politics of sovereignty takes place not only in human language, but also in other registers, involving semiotic markers of bodily gesture, visual and pheromonal signals, and complex forms of vocalisations.<sup>168</sup>

All this amounts to recognising that non-human life can be a legal subject, and around the world examples are emerging of explicitly granting rights for nature. Ecuador's Constitution is the most well-known example that acknowledges respect for the existence of *Pacha Mama* and providing it a right to restoration.<sup>169</sup> Bolivia recognises that nature has the right to continue its ecosystem processes without human

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<sup>168</sup> Youatt, 'Interspecies Relations, International Relations' (n 112) at 220.

<sup>169</sup> Chapter 7 of the Ecuadorian Constitution 2008 on the Rights of Nature states in Art 71 that 'nature, or Pacha Mama, where life is reproduced and occurs, has the right to integral respect for its existence and for the maintenance and regeneration of its life cycles, structure, functions and evolutionary processes'. For more details, see the Ecuadorian Constitution, ch 7, Arts 71-74, which can be downloaded at: <http://pdba.georgetown.edu/Constitutions/Ecuador/english08.html>.

alteration and protected from pollution.<sup>170</sup> In New Zealand, the Whanganui River has been granted legal personhood.<sup>171</sup> Despite the sense that we should celebrate that rights of nature are being recognised in constitutions and statutes, we also need to recognise with caution that the way nature has been brought into these legal framings is not without its own flaws. What made nature appear in the Ecuadorian Constitution, is not the recognition of nature as a political actor per se, but it involved a decade-long struggle between Chevron and indigenous peoples over environmental damage caused by oil spills.<sup>172</sup> It seems that for all their progressiveness, the above examples all suggest that the inclusion of non-human life forms in political and legal institutions still require human speech acts. The danger is that these so-called broad-minded forms of recognising rights of nature continue to reproduce anthropocentrism.

According to Latour, Serres' pacific project of a contract among parties may be inappropriate as the Anthropocene suggests that war may be more likely and imminent.<sup>173</sup> This suggests that we may have been too late with a natural contract. Ideals of deep ecology may have inspired Serres when he wrote *The Natural Contract* and we may have to wonder to what extent deep ecology as a concept can still save the

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<sup>170</sup> Bolivia, Framework Act for the Rights of Mother Earth and Holistic Development to Live Well (2012) Bolivia, Ley Marco de la Madre Tierra y Desarrollo Integral para Vivir Bien 2012 (Bolivia) [www.lexivox.org/norms/BO-L-N300.xhtml](http://www.lexivox.org/norms/BO-L-N300.xhtml).

<sup>171</sup> In 2013, the Tūhoe people and the New Zealand government agreed upon the Te Urewera Act, giving the Te Urewera National Park 'all the rights, powers, duties, and liabilities of a legal person', [www.legislation.govt.nz/act/public/2014/0051/latest/DLM6183601.html](http://www.legislation.govt.nz/act/public/2014/0051/latest/DLM6183601.html). Te Urewera Act 2014, Public Act 2014 No 51.

Similarly, the Maori people have successfully pursued similar results for the Whanganui River and its tributaries, under the Maori worldview 'I am the River and the River is me'. Under the Tutohu Whakatupua Treaty Agreement, the river is given legal status under the name Te Awa Tupua. Te Awa Tupua is recognised as 'an indivisible and living whole' and 'declared to be a legal person'. Te Awa Tupua (Whanganui River Claims Settlement) Bill, Government Bill 129—1, [www.legislation.govt.nz/bill/government/2016/0129/latest/whole.html#DLM6830851](http://www.legislation.govt.nz/bill/government/2016/0129/latest/whole.html#DLM6830851). For more general details, see [www.earthlawcenter.org/international-law/2016/8/new-zealand](http://www.earthlawcenter.org/international-law/2016/8/new-zealand).

<sup>172</sup> Fitz-Henry (n 12) at 264.

<sup>173</sup> Latour (n117) at 6.

planet. For Latour, we have entered another time where we need to think of protecting ourselves against one another and the revenge of Gaia. This may require a different legal code than civil law in the form of a contract; Latour even suggests that a penal code may be more appropriate. To be sure: '[i]n Serres' time we could still dream of making a natural contract with nature, but Gaia is another subject altogether- maybe also a different sovereign'.<sup>174</sup>

If Gaia has sovereign power, the Anthropocene also opens up the debate of environmental constitutionalism and legality, wherein states, international and domestic law, all have a duty to protect Gaia. When the Inter-American Court of Human Rights ruled in 2012 in the case *Sarayaka v Ecuador* that the state had an obligation towards the protection of indigenous dignity and rights, these rights were clearly linked to a right to property.<sup>175</sup> This ruling gives little hope that nature will ever become a legal subject; once more nature has been reduced to an object. Reading the court's ruling is a sombre experience in that respect. The law of the forest was not represented in the court case, let alone being recognised. Other ways of representing communication and non-linguistic signification has clearly not yet entered the legal domain. Yet, a closer conversation between law and anthropology may inject a much-needed understanding about what indigenous peoples' worldviews and ontologies may actually mean, including an appreciation of a wider implication that law may turn its attention to the importance of biosemiotics when studying the meaning and role of (environmental) law in the Anthropocene.

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<sup>174</sup> *ibid*, 6.

<sup>175</sup> *Indigenous Peoples of Sarayaku v Ecuador*, Merit and Reparation Judgement, Inter-American Court of Human Rights (ser C) No 245, ¶151 (27 June 2012).

