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## Critical Environmental Law and the Double Register of the Anthropocene: A Biopolitical Reading

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### I. Introduction

We live in times marked by uncertainties and contestations. The deep and pervasive influence of humankind on all planetary processes and ecosystems has been taken to indicate a new geological epoch, aptly called the Anthropocene—the ‘age of man’. The Anthropocene, however, while the ultimate consequence of modernity and of its categories, signals simultaneously a crisis. Nature is either dead or has entered a post-natural state.<sup>1</sup> Science has arguably entered a post-normal state where a plurality of knowledges co-exist and make competing claims to truth. Environmental law, closely intertwined with epistemological, axiological and material problematics, is itself an increasingly complex and contested field of law and its traditional reference categories no longer offer critical purchase. Against this background, this chapter will try to offer a biopolitical reading of environmental law, with a view to further advancing the project of what has been tentatively called critical environmental law.<sup>2</sup> Critical environmental law aims at making visible the slippages that intervene at the margins of the intersection between law and ecology. In my own articulation of critical environmental law I utilise a genealogical method of inquiry, in order to problematise linear histories. Genealogy is in fact aimed at the reconstruction of the contingencies and contestations (what Foucault, following Nietzsche, calls respectively descent<sup>3</sup>

<sup>1</sup> See eg B McKibben, *The End of Nature* (New York, Random House, 1989); and J Purdy, *After Nature: A Politics for the Anthropocene* (Cambridge, MA Harvard University Press, 2015).

<sup>2</sup> For a first discussion of a ‘critical’ environmental law, see the edited volume A Philippopoulos-Mihalopoulos (ed), *Law and Ecology: New Environmental Foundations* (London, Routledge Glasshouse Book, 2011).

<sup>3</sup> M Foucault, ‘Nietzsche, Genealogy, History’ in DF Bouchard (ed), *Language, Counter-Memory, Practice: Selected Essays and Interviews* (Ithaca, New York, Cornell University Press, 1977) 80–83.

and emergence)<sup>4</sup> constituting the complex history of phenomena, concepts and, importantly, law. A genealogical approach, moreover, and importantly, leads to a methodology that is inevitably pluralist and perspectival,<sup>5</sup> insofar as every concept is capable of having ‘many antagonistic senses that depend on the perspective of the forces that try to dominate it.’<sup>6</sup> As such, critical environmental law radically problematises analyses that understand environmental law as a legal-technical mechanism that applies ‘the science of ecology,’<sup>7</sup> or as inevitably moving from anthropocentric to ecocentric forms. Within this methodological context, biopolitics offers a particularly suited framework for disarticulating the binaries and the linearities traversing environmental law (and environmental legal scholarship) in the Anthropocene. Indeed genealogy and biopolitics are highly complementary, in that biopolitics is at bottom genealogical.<sup>8</sup>

In this chapter, I specifically explore critical environmental law through the lens of biopolitics. In part II, I discuss the crisis of three key referents of modernity: knowledge, nature and law. In part III, I present two registers of engagement with the challenges of the Anthropocene. In parts IV and V, I will first present biopolitics as a theoretical and methodological device, and then use that analysis to read and problematise environmental law.

## II. Knowledge, Nature and Law in the Anthropocene

### A. The Anthropocene in Brief

The human influence on Earth has arguably acquired the character of a distinct geological force.<sup>9</sup> A proposal is under discussion to introduce a new formal geological epoch, namely the Anthropocene (the current epoch being the Holocene),<sup>10</sup>

<sup>4</sup> *ibid.*, 83–86.

<sup>5</sup> C Douzinas and A Geary, *Critical Jurisprudence. The Political Philosophy of Justice* (Oxford and Portland, Oregon, Hart Publishing, 2005) esp 49ff.

<sup>6</sup> *ibid.*, 49

<sup>7</sup> *ibid.*, 2; see also C Voigt, ‘The Principle of Sustainable Development. Integration and Ecological Integrity’ in C Voigt (ed), *Rule of Law for Nature: New Dimensions and Ideas in Environmental Law* (Cambridge, Cambridge University Press, 2013), which, similarly, maintains that ‘science has the answers’, and that law is tasked with implementing those answers; at 153.

<sup>8</sup> Thus eg T Lemke, *Biopolitics. An Advanced Introduction* (New York, New York University Press, 2011) ch 9, 177ff. Drawing on Lemke, I have also combined genealogy and biopolitics in my PhD thesis: V De Lucia, *The Ecosystem Approach in International Environmental Law. A Biopolitical Critique*, PhD Thesis (Faculty of Law, UiT, Arctic University of Norway, 2016).

<sup>9</sup> J Zalasiewicz, M Williams, W Steffen and P. Crutzen, ‘The New World of the Anthropocene’ (2010) 44(7) *Environmental Science and Technology* 2228.

<sup>10</sup> A proposal to formalise the Anthropocene as a new geological unit within the Geological Time Scale is under development by the ‘Anthropocene’ working group of the Subcommission on Quaternary Stratigraphy, with the view of presenting it for consideration to the International Commission on Stratigraphy (the largest scientific organisation within the International Union of Geological Sciences), available at: <http://quaternary.stratigraphy.org/workinggroups/anthropocene/>.

whose distinctiveness is precisely the dominant role humanity has achieved over Earth and its systems.<sup>11</sup> Already in 1873, the growing influence of humanity on the natural world prompted Italian geologist Antonio Stoppani to speak of an ‘anthropozoic era.’<sup>12</sup> Much more recently, Paul Crutzen, in a now famous essay published in *Nature* and entitled ‘The Geology of Mankind’, mainstreamed the term Anthropocene.<sup>13</sup> More specifically, the Anthropocene denotes the particular depth, pervasiveness and permanence of humankind’s impact on Earth and all of its ecosystems.

Even pending its formal recognition as a new geological epoch however, the Anthropocene has already become an important conceptual framework whose currency and purchase has ‘rapidly escalated.’<sup>14</sup> To be sure, in a very short time, the Anthropocene has given rise to at least three dedicated academic journals.<sup>15</sup> The Anthropocene raises new and crucial questions related to the identification of

the non-negotiable planetary preconditions that humanity needs to respect in order to avoid the risk of deleterious or even catastrophic environmental change at continental to global scales.<sup>16</sup>

While the exact periodisation of the Anthropocene is not entirely clear (nor, perhaps, of crucial significance), it can be argued that there is significant overlap between modernity and at least an important intensification of the effects of the Anthropocene, and that the key conjunction between the two is arguably represented by the rise of capitalism.<sup>17</sup> In this respect, and perhaps paradoxically, the very modern categories that underpin the Anthropocene, faced with the socio-ecological consequences of their ‘success’, are in a state of crisis. The Anthropocene then signals simultaneously a deep socio-ecological crisis (whose details need not be rehearsed here)<sup>18</sup> and a deep cultural crisis.

## B. The Crisis of the Categories of Modernity

As anticipated, at least three key referent categories of modernity—knowledge, nature and law—are today visibly in a state of crisis. The modern concept

<sup>11</sup> S Lewis and M Maslin, ‘Defining the Anthropocene’ (2015) 519 *Nature* 171.

<sup>12</sup> P Crutzen, ‘Geology of Mankind’ (2002) 415 *Nature* 23.

<sup>13</sup> *ibid.*, 23.

<sup>14</sup> Lewis and Maslin (n 11) at 171.

<sup>15</sup> Such as *Anthropocene*, published by Elsevier, [www.journals.elsevier.com/anthropocene/](http://www.journals.elsevier.com/anthropocene/); *The Anthropocene Review*, published by Sage, <http://anr.sagepub.com/>; *Elementa: Science of the Anthropocene*, published by BioOne, [www.elementascience.org](http://www.elementascience.org).

<sup>16</sup> J Rockström and others, ‘Planetary Boundaries: Exploring the Safe Operating Space for Humanity’ (2009) 14 (2/32) *Ecology and Society* 2.

<sup>17</sup> On the ‘interpenetration’ of modernity and capitalism, see eg B De Sousa Santos, *Toward a New Common Sense. Law, Science and Politics in a Paradigmatic Transition* (New York, London, Routledge, 1995).

<sup>18</sup> eg the United Nations Environment Programme’s (UNEP) 5th Global Environmental Outlook Report emphatically articulates how: ‘[t]he scale, spread and rate of change of global drivers are without precedent. Burgeoning populations and growing economies are pushing environmental systems to

of knowledge, modelled on Newtonian physics premised on universal and predictable natural laws, and articulated as an ‘epistemology of mastery’,<sup>19</sup> has been upset and rendered unstable by biological and ecological models of knowledge that are increasingly described as postmodern<sup>20</sup> or post-normal.<sup>21</sup> Knowledge in the Anthropocene is characterised by epistemological pluralism<sup>22</sup> and by an inevitable entanglement with values,<sup>23</sup> while a central role is assumed by uncertainty and complexity.<sup>24</sup> From this (postmodern) vantage, science can no longer offer predictions, but rather plausible scenarios,<sup>25</sup> while ignorance acquires a crucial epistemic role.<sup>26</sup> Moreover, in the context of ‘truth pluralism’<sup>27</sup>—that is of competing claims to truth which cannot be adjudicated objectively—science is fully revealed to be ‘normative science’.<sup>28</sup>

Nature, in turn, has been repeatedly declared dead;<sup>29</sup> or has been exposed for being a crucial political category aimed at excluding certain voices (mostly non-human) rather than describing reality objectively;<sup>30</sup> or has been problematised from a pluralist perspective, which would rather speak of a plurality of *natures*,

destabilizing limits’, UNEP, *The Fifth Global Environment Outlook*, GEO-5, Environment for the Future We Want (DEW/1417/NA, 2012) 4.

<sup>19</sup> That is as a mode of knowledge that is ordained at the mastery, or domination, of the natural world. See esp W Leiss, *The Domination of Nature* (Montreal and Quebec, McGill-Queens University Press, 1994).

<sup>20</sup> T Allen, C Zellmer and C Wuennenberg, ‘The Loss of Narrative’; and K deLaplante, ‘Is Ecosystem Management a Postmodern Science?’, both in K Cuddington and B Beisner (eds), *Ecological Paradigms Lost: Routes of Theory Change* (Burlington, Mass, Elsevier Academic Press, 2005).

<sup>21</sup> deLaplante, *ibid*; DeLaplante specifically discusses Ravetz and Funcowitz’s framework of post-normal science in relation to the ecosystem approach.

<sup>22</sup> S Gutwirth and E Naim-Gesbert, ‘Science et droit de l’environnement: réflexions pour le cadre conceptuel du pluralisme de vérités’ (1995) 34 *Revue interdisciplinaire d’études juridiques* 33; M Sagoff, ‘The Plaza and the Pendulum: Two Concepts of Ecological Science’ (2003) 18(4) *Biology and Philosophy* 529; deLaplante, ‘Is Ecosystem Management a Postmodern Science?’, M Tallacchini, ‘A Legal Framework from Ecology’ (2000) 9(8) *Biodiversity And Conservation* 1085; K Shrader-Frechette, ‘Methodological Rules for Four Classes of Scientific Uncertainty’ in J Lemons (ed), *Scientific Uncertainty and Environmental Problem Solving* (Oxford, Blackwell Science, 1996).

<sup>23</sup> Tallacchini, ‘A Legal Framework from Ecology’ (n 22); Shrader-Frechette, ‘Methodological Rules for Four Classes of Scientific Uncertainty’ (n 22).

<sup>24</sup> Tallacchini (n 22).

<sup>25</sup> Climate science is a perfect case in point, where each prediction of the IPCC is framed by and nuanced with specific boundaries of uncertainty and so-called ‘confidence’ values and offers scenarios, rather than predictions; see eg C Field and others (eds), *Climate Change 2014: Impacts, Adaptation and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge, United Kingdom and New York, Cambridge University Press, 2014).

<sup>26</sup> Thus eg Tallacchini (n 22).

<sup>27</sup> Gutwirth and Naim-Gesbert (n 22).

<sup>28</sup> *ibid*, 61: ‘Le pluralisme de vérités montre bien que ce rôle absolu, extra-politique, extra-juridique et indiscutable accordé à la science et ses verities est inacceptable’. See also, on normative science, R Lackey, ‘Appropriate Use of Ecosystem Health and Normative Science in Ecological Policy’ in D Rapport and others, *Managing for Healthy Ecosystems* (Boca Raton, FL: CRC Press, 2002).

<sup>29</sup> McKibben, *The End of Nature* (n 1).

<sup>30</sup> B Latour, ‘An Attempt at a “Compositionist Manifesto”’ (2010) 41 *New Literary History* 471.

(whether the result of plural cultural interpretations of nature or of ontological diversities) that refract it in a multiplicity of *worlds*, each with its own particular ontological articulation, both human and non-human.<sup>31</sup>

Law, particularly in its modern rational and sovereign articulation (whether in the natural law or positivist inflection), is also in a state of crisis. Historically, law, hand in hand with science, has arguably had the role of taming and ‘othering’ nature, through the operation of what has been termed the ‘scientifico-legal complex’,<sup>32</sup> which was developed largely under the influence of the prevailing Cartesian ontology.<sup>33</sup> In this sense law has been a central enabling element of the Anthropocene, by binding together science and the political epistemology of nature in an authoritative and operative framework. Yet, as Anna Grear suggests, law has ‘failed thus far to respond [to the challenges of the Anthropocene] in any way that really counts.’<sup>34</sup> Environmental law, whose special relevance derives from being the specific legal response to the unfolding socio-ecological crises, has proved ultimately inadequate, largely owing to its reproduction of the ontological and epistemological commitments of legal modernity.<sup>35</sup> Yet environmental law is located at an epistemological crossroads (and that is perhaps what makes its inadequacy overlaid with tragic self-awareness). On the one hand, environmental law’s organising logic responds to the central categories of modernity; on the other, environmental law can no longer rely on those categories, that is, on uniform and stable truths, on a stable concept of nature, and on a positivist concept of law. Entangled in an unresolvable series of ontological, epistemological and axiological conflicts, environmental law itself thus becomes postmodern,<sup>36</sup> ‘hot’,<sup>37</sup> and complexly contested.<sup>38</sup> Environmental law is thus affected by a ‘deep contradiction’,<sup>39</sup> a contradiction that perpetuates and even extends, rather than resolves the pervasiveness and intensity of environmental problems:<sup>40</sup> self-reflexively aware of how

<sup>31</sup> See eg M Cadena, ‘Indigenous Cosmopolitics in the Andes: Conceptual Reflections beyond “Politics”’ (2010) 25(2) *Cultural Anthropology* 334 and E Vivieros de Castro, ‘Perspectival Anthropology and the Method of Controlled Equivocation’ (2004) 2(1) *Tipiti: Journal of the Society for the Anthropology of Lowland South America* 3.

<sup>32</sup> J Holder, ‘New Age: Rediscovering Natural Law’ (2000) 53(1) *Current Legal Problems* 151, 165.

<sup>33</sup> Characterised by a powerful set of binaries reflecting a fundamental dualism.

<sup>34</sup> A Grear, ‘Towards a New Horizon: in Search of a Renewing SocioJuridical Imaginary’ (2013) 3(5) *Oñati Socio-Legal Series* 966, 970.

<sup>35</sup> Thus eg *ibid*; M M’Gonigle and L Takeda, ‘The Liberal Limits of Environmental Law: A Green Legal Critique’ (2013) 30(3) *Pace Environmental Law Review* 1005.

<sup>36</sup> N De Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules* (Oxford, Oxford University Press, 2002).

<sup>37</sup> Environmental Law is considered “hot law” insofar as it deals with “hot situations” in which the agreed frames, legal and otherwise, for how we understand and act in the world are in a constant state of flux and contestation; E Fisher, ‘Environmental Law as “Hot” Law’ (2013) 25(3) *Journal of Environmental Law* 347, 347–48.

<sup>38</sup> V De Lucia, ‘Competing Narratives and Complex Genealogies: The Ecosystem Approach in International Environmental Law’ (2015) 27(1) *Journal of Environmental Law* 91.

<sup>39</sup> M’Gonigle and Takeda, ‘The Liberal Limits of Environmental Law’ (n 35) at 1005.

<sup>40</sup> *ibid*, 1005.

the ‘environmental problematic’ can only be addressed by a change in paradigm, ‘*environmental law itself does not address this problematic; it operates within it.*’<sup>41</sup> Its crisis, in other words, is inevitably inscribed in its very core.

In summary, all three categories—knowledge, nature and law—have played a crucial role towards the conceptual articulation and material concretisation of the Anthropocene. But while the Anthropocene has emerged and intensified largely thanks to these three key categories, it has also determined their destabilisation, to the extent that the Anthropocene has revealed the limits of normal Newtonian science, while nature as a stable political epistemology and law as a sovereign form, have also shown all their limitations and are in a state of crisis.

### III. The Double Register of the Anthropocene

The Anthropocene has prompted very different registers of intellectual engagement with its challenges. Conservation ethics is no longer clear-cut, and is rather a hotly contested field of discursivity, stretched between two internal articulations that are struggling for the ‘soul’ of conservation biology as a discipline. Simultaneously, and in parallel fashion, two main registers are emerging as competing orientations in relation to environmental law and policy. In fact, some invoke the Anthropocene as evidence of the end of nature, and suggest (in what will turn out to be a *biopolitical* argument, as will be made clear in the next part), that the entire world needs to be inserted into a matrix of human control in order to be protected, or indeed enhanced.<sup>42</sup> I will call this particular register ‘interventionist’. A second register, which I will call ‘radical’, suggests rather that ‘[i]n the climate-pressed Anthropocene epoch, nothing could be more urgent than fresh engagements with the fractious relationships between “humanity”, law and the living order’.<sup>43</sup> What is required thus is a ‘complete rethink’ of law.<sup>44</sup> What these two modes of engagement with the questions raised by the Anthropocene share, however, is the acknowledgement of the critical ecological juncture that the onset of the Anthropocene (both in its geological and more immediately

<sup>41</sup> *ibid.*, 1019–20.

<sup>42</sup> See eg D Botkin, *Discordant Harmonies: A New Ecology for the Twenty-first Century*, 1st edn (Oxford, Oxford University Press, 1990); M Marvier, ‘New Conservation is True Conservation’ (2013) 28(1) *Conservation Biology* 1–3; M Marvier and P Kareiva, ‘The Evidence and Values Underlying “New Conservation”’ (2014) 29(3) *Trends in Ecology and Evolution* 131–32; P Kareiva, M Marvier and R Lalasz, ‘Conservation in the Anthropocene Beyond Solitude and Fragility’ (2012) *The Breakthrough Journal*.

<sup>43</sup> A Grear and E Grant (ed), *Thought, Law, Action and Rights in the Age of Environmental Crisis* (Cheltenham, Edward Elgar, 2015); see [www.e-elgar.com/shop/thought-law-rights-and-action-in-the-age-of-environmental-crisis](http://www.e-elgar.com/shop/thought-law-rights-and-action-in-the-age-of-environmental-crisis).

<sup>44</sup> L Kotzé, ‘Human Rights and the Environment in the Anthropocene’ (2014) 1(3) *The Anthropocene Review* 252, 252.

material dimension, and in its discursive articulations) marks. I will discuss both in turn, and then, before moving on to develop my biopolitical argument, canvass the ways in which both can be located in a biopolitical ‘zone of irreducible indistinction.’<sup>45</sup> I start the analysis by outlining the heart of the debate that underpins both the interventionist and the radical register.

## A. The Heart of the Dilemma: Conservation Ethics at a Crossroad

An internal struggle is affecting conservation biology, the branch of biology behind the development of the concept of biodiversity and a significant, even decisive, scientific and normative influence on environmental law and policy. This struggle, characterised by some commentators as a ‘battle for the soul of conservation science’,<sup>46</sup> is primarily linked to the ethics of conservation, as especially captured by the question: *why* should we conserve nature? The binary anthropocentrism/ecocentrism is a key boundary in this debate. Yet the *methods* and *tools* of conservation are also a key element. To defuse the increasingly hot debate, a call for unity appeared in *Nature* in November 2014.<sup>47</sup> The comment takes up the ‘age-old conflict around [the] seemingly simple question [...] of why [...] we conserve nature.’<sup>48</sup> The authors of the comment—and 238 additional signatories—propose

a unified and diverse conservation ethic; one that recognizes and accepts all values of nature, from intrinsic to instrumental, and welcomes all philosophies justifying nature protection and restoration, from ethical to economic, and from aesthetic to utilitarian.<sup>49</sup>

This, in many ways, is a recognition of the epistemological plurality that characterises ecology as a postmodern science. Yet there are two main competing approaches to conservation. One is attuned to the tradition of protected areas and ecological integrity, strongly advocating that nature should be conserved for its ‘intrinsic value’ (rather than merely for instrumental purposes) and finds its most prominent representative in Michael Soulé, one of the scientists behind the concept of biodiversity.<sup>50</sup> The other approach, which finds leading advocates in Peter Kareiva and Michelle Marvier, acknowledges the end of nature in the Anthropocene and therefore favours a pragmatic embrace of artificial nature and human

<sup>45</sup> G Agamben, *Homo Sacer. Sovereign Power and Bare Life* (Stanford, Stanford University Press, 1998) 12.

<sup>46</sup> K Kloor, ‘The Battle for the Soul of Conservation Science’ (2015) XXXI(2) *Issues in Science and Technology* available at: <http://issues.org/31-2/kloor/>.

<sup>47</sup> H Tallis and J Lubchenco, ‘A Call for Inclusive Conservation’ (2014) 515 *Nature* 27.

<sup>48</sup> *ibid*, 27.

<sup>49</sup> *ibid*, 27.

<sup>50</sup> See eg M. Soulé, *Conservation Biology: The Science of Scarcity and Diversity* (Sunderland, MA, Sinauer Associates Inc, 1986), or more recently, a book where Soulé defends the idea of nature conservation against what he calls ‘postmodern deconstruction’; M Soulé and G Lease (eds), *Reinventing Nature? Responses to Postmodern Deconstruction* (Washington, DC, Island Press, 1995).



management in order to conserve a nature beneficial to humans through what is called ‘new conservation’.<sup>51</sup>

While traditional conservation ethics, born of the national parks movement, reproduces a certain separation between humanity and nature through the crucial policy tool of protected areas, Kareiva and other new conservationists shift perspective, and envision a ‘[f]orward-looking conservation’ that ‘protects natural habitats where people live and extract resources’, and that ‘works with corporations to find mixes of economic and conservation activities that blend development with a concern for nature’.<sup>52</sup> Their argument hinges on two primary reasons. First, protected areas, the primary tool of traditional conservation, are insufficient and under siege.<sup>53</sup> Secondly, linking nature conservation and human benefits (ie ecosystem services) allows to prioritise conserving areas that deliver important benefits to human communities (especially poor ones) which ‘is imperative for conservation effectiveness’.<sup>54</sup> In this respect, Marvier and Kareiva urge conservation to become pluralist, ie to adopt a larger toolbox, rather than rely only on protected areas. Yet in response, Soulé argues that such an approach would only hasten ‘ecological collapse globally, eradicating thousands of kinds of plants and animals’.<sup>55</sup> Soulé’s perspective, which underlies much environmental scholarship and much of the environmental movement, underpins also the legal notion of protected areas. However, and here we encounter one of the contradictions affecting environmental law, this turns arguably environmental law into a mechanism ‘designed to keep chaos [...] at arm’s length’,<sup>56</sup> separating ‘the sacred [from] the abject’.<sup>57</sup> In this light, environmental law’s protection and preservation of ‘the more ‘majestic’ aspects of Nature’ rely upon acts of partition and classification of vulnerable areas worthy of protection, ‘islands of wildness’ which are ‘conceivable only on the basis of an [otherwise] ongoing and generalized

<sup>51</sup> See eg M. Marvier, ‘New Conservation is True Conservation’ (2013) 28(1) *Conservation Biology* 1; M Marvier and P Kareiva, ‘The Evidence and Values Underlying “New Conservation”’ (2014) 29(3) *Trends in Ecology and Evolution* 131.

<sup>52</sup> Kareiva and Marvier, quoted in Kloor, ‘The Battle for the Soul of Conservation Science’ (n 46).

<sup>53</sup> Marvier and Kareiva, ‘The Evidence and Values Underlying “New Conservation”’ (n 51) at 131.

<sup>54</sup> Marvier, ‘New Conservation is True Conservation’ (n 51) at 1.

<sup>55</sup> Soulé, as quoted in Kloor (n 46). Soulé, Kareiva and Marvier have been prominently debating conservation in the past few years; see eg M Soulé, ‘The New Conservation’ (2013) 27(5) *Conservation Biology* 895; Marvier (n 51); Marvier and Kareiva (n 51); and P Kareiva, ‘New Conservation: Setting the Record Straight and Finding Common Ground’ (2014) 28(3) *Conservation Biology* 634.

<sup>56</sup> M Hasley, ‘Majesty and Monstrosity: Deleuze and the Defence of Nature’ in Philippopoulos-Mihalopoulos (ed), *Law and Ecology* (n 2) at 218–19.

<sup>57</sup> *ibid.*, 219. In a similar fashion, Lee Godden emphasises how modernity constructs nature as other, and in doing so allows only one of two alternative views: either as an object of control—through property rights—or as ‘wilderness to be preserved apart from human society’; L Godden, *Nature as Other: The Legal Ordering of the Natural World*, PhD Thesis (Queensland, Faculty of Law, Griffith University, 2000) 2. See also S Chaplin, ‘Fictions of Origin: Law, Abjection, Difference’ (2005) 16(2) *Law and Critique* 161, which describes law as a ‘dividing line that serves to exclude filth’, that is, to separate the filth of industrial modernity from the purity that protected areas are supposed to guarantee and protect, through law; *ibid.*, 165–66.

ecological violence'.<sup>58</sup> This maintains the discourse within a dialectic between the monstrous and the majestic, the abject and the sacred,<sup>59</sup> the filth and the pure,<sup>60</sup> which traditionally traverses and shapes environmental law throughout.<sup>61</sup>

This section has outlined the debate that animates and translates in the two registers of engagement with the Anthropocene alluded to. The next two sections will briefly describe each in turn.

## B. The Interventionist Register

The interventionist register starts from two basic premises. First, current conservation policies do not work. Second, the distinction between natural and artificial no longer has any meaning. The conclusion is that, rather than protect enclaves of pristine nature (which is from the interventionist perspective an illusion), we should impose a comprehensive system of management and control on the entire planet in order to ensure its conservation, and even its enhancement.<sup>62</sup> In the face of it, the argument is apparently sensible. The conclusions that are drawn from the premises are, however, problematic, as I will show below.

At the forefront of this orientation, one finds Daniel Botkin (one of the main minds behind the so-called New Ecology) and more recently,<sup>63</sup> Peter Kareiva, Chief Scientist of the Nature Conservancy, and charismatic figure of the conservation biology community (see above).<sup>64</sup> The interventionists' central argument is that the rapid decline in all planetary health indicators suggests that traditional conservation does not work.<sup>65</sup> Moreover, we live in a post-natural world, and conservation 'cannot promise a return to pristine, prehuman landscapes', because humans have 'already profoundly transformed the planet'.<sup>66</sup> What conservation can promise, on the other hand, is

a new vision of a planet in which nature—forests, wetlands, diverse species, and other ancient ecosystems—exists amid a wide variety of modern, human landscapes. For this to happen, conservationists will have to jettison their idealized notions of nature, parks,

<sup>58</sup> Hasley, 'Majesty and Monstrosity' (n 56) at 219; Kotzé, 'Human Rights and the Environment in the Anthropocene' (n 44) at 124.

<sup>59</sup> Hasley (n 56).

<sup>60</sup> S Chaplin, 'Fictions of Origin: Law, Abjection, Difference' (2005) 16(2) *Law and Critique* 161, 165–66.

<sup>61</sup> Hasley (n 56).

<sup>62</sup> See eg Botkin, *Discordant Harmonies* (n 42); Marvier (n 51) 1–3; Marvier and Kareiva (n 51) at 131–32.

<sup>63</sup> Botkin is a prominent figure in the 1990s, and especially within the North American context. See eg the debate that ensued in relation to ecosystem management and to Botkin's work in the pages of the *Pace Journal of Environmental Law* between Bruce Pardy and JB Ruhl.

<sup>64</sup> See eg Kareiva, Marvier and Lalasz, 'Conservation in the Anthropocene' (n 42).

<sup>65</sup> *ibid.*

<sup>66</sup> *ibid.* Similarly Botkin (n 42).

and wilderness—ideas that have never been supported by good conservation science—and forge a more optimistic, human-friendly vision.<sup>67</sup>

This message hinges on the conviction that parks and protected areas alone do not and cannot halt the degradation of natural ecosystems, and that other approaches are necessary that aim at conserving *all* nature, letting go of the illusion of a pristine nature that requires a legal demarcation of inaccessibility in order to remain pristine. Indeed, in the Anthropocene, nature ‘will be a nature that we make; the question is the degree to which this molding will be intentional or unintentional, desirable or undesirable [to humans]’.<sup>68</sup>

If worldviews and conservation paradigms are changing in light of the Anthropocene, where does that leave law? More pertinently, what is the direction of change for environmental law? Botkin himself complained in the mid-1990s that despite the ecological revolution ‘our laws and policies are still based on outmoded [ecological] concepts’,<sup>69</sup> though he was not the only one that explored the significance of the ‘new ecology’ for environmental law.<sup>70</sup> He argued for a change in paradigm in environmental law,<sup>71</sup> one no longer based on what he called the ‘myth’ of the balance of nature, but rather a new paradigm, embracing the chaotic ‘discordant harmonies’ traversing natural processes.<sup>72</sup> As already anticipated, the problematic, and even troubling, aspect of the interventionist approach, from the perspective of the present writer, is the conclusions that are drawn, as we shall see.

### C. The Radical Register

The Anthropocene however, informs also an increasing number of radical scholarly reflections and ethico-political projects. Critical scholars argue that the Anthropocene requires, not an intensification of human interventions, but a radical, paradigmatic shift in human theoretical endeavours.<sup>73</sup> Louis Kotzé argues in this respect that ‘the arrival of the Anthropocene is possibly set to require a *complete rethink*’ of the framework of human rights in relation to the

<sup>67</sup> Karieva, Marvier and Lasasz (n 42).

<sup>68</sup> Botkin (n 42) 193. Emphasis mine.

<sup>69</sup> D Botkin, *Adjusting Law to Nature’s Discordant Harmonies* (1996) 7 *Duke Environmental Law and Policy Forum* 25.

<sup>70</sup> See in this respect esp D Tarlock, ‘The Nonequilibrium Paradigm in Ecology and the Partial Unraveling of Environmental Law’ (1994) 27 *Loyola LA Law Review* 1009; and J Wiener, ‘Law and the New Ecology: Evolution, Categories and Consequences: Review Essay’ (1995) 22(2) *Ecology Law Quarterly* 325

<sup>71</sup> *ibid.*

<sup>72</sup> Botkin (n 42).

<sup>73</sup> See, among an increasing scholarship, the papers presented at ‘The Thousand Names of Gaia: From the Anthropocene to the Age of the Earth’ conference (Rio de Janeiro, 15–19 September 2014) available at: <https://thethousandnamesofgaia.wordpress.com/the-conferences-texts/>. See also eg Kotzé (n 44); D Vidas, ‘The Anthropocene and the International Law of the Sea’ (2011) 369 *Philosophical Transactions of the Royal Society A* 909–25.

environmental regulatory domain.<sup>74</sup> Similarly, a recent collection edited by Anna Grear and Evadne Grant, and titled *Thought, Law, Rights and Action in the Age of Environmental Crisis*, emphasises the urgency of this task by underlining how '[i]n the climate-pressed Anthropocene epoch, nothing could be more urgent than fresh engagements with the fractious relationships between 'humanity', law and the living order'.<sup>75</sup> More specifically, one of the contributions to that collection articulates very clearly one of the pathways through which this urgent need to think law beyond the Anthropocene (that is, beyond legal modernity) may emerge: 'today', suggests Pieraccini, '[t]he task for legal scholars is [to] produce a new language' so as to disentangle law and legal strategies 'from the constraints imposed by the tradition of [modernity]'.<sup>76</sup>

Arguably, the particular environmental legal scholarship approaching the challenges of the Anthropocene via the radical register, regardless of theoretical or methodological inclinations, increasingly finds a common unifying premise in the recognition that the unfolding socio-ecological crises are a consequence of the anthropocentric foundation of modernity.<sup>77</sup> Law, in turn, understood as a 'significant description of the way a society perceives itself and projects its image to the world',<sup>78</sup> is part of the problem: 'the legal order reflect[s] a harmful and outdated anthropocentric worldview',<sup>79</sup> one which ought to be replaced by ecocentrism.<sup>80</sup> Yet ecocentrism remains silent as regards the ways to address the crisis of the categories of modernity discussed above. Indeed, it arguably presumes their existence in order to function as a conceptual framework.<sup>81</sup> But as it has been convincingly shown, multiple ethical positions can be derived from the science of ecology through a series of 'alchemic' arguments,<sup>82</sup> in ways that further confirm the post-modern and contested character of knowledge in the Anthropocene.

<sup>74</sup> Kotzé (n 44) at 252, emphasis mine.

<sup>75</sup> Grear and Grant, *Thought, Law, Action and Rights in the Age of Environmental Crisis* (n 43).

<sup>76</sup> M Pieraccini, 'Reflections on the Relationship between Environmental Regulation, Human Rights and beyond—with Heidegger' in Grear and Grant (n 43) at 95.

<sup>77</sup> See eg K. Bosselmann, 'Losing the Forest for the Trees: Environmental Reductionism in the Law' (2010) 2(8) *Sustainability* 2424; R Kim, and K Bosselmann, 'International Environmental Law in the Anthropocene: Towards a Purposive System of Multilateral Environmental Agreements' (2013) 2(2) *Transnational Environmental Law* 285; C Cullinan, *Wild Law: A Manifesto for Earth Justice* (South Africa, Siber Ink, 2002); P Burdon, *Earth Jurisprudence: Private Property and the Environment* (New York, Glasshouse/Routledge, 2014).

<sup>78</sup> P Burdon, 'Wild Law: The Philosophy of Earth Jurisprudence' (2010) 35(2) *Alternative Law Journal* 58, 58.

<sup>79</sup> P Burdon, *Earth Jurisprudence: Private Property and Earth Community*, PhD Thesis (Adelaide Law School, the University of Adelaide, 2011) 131.

<sup>80</sup> P Taylor, *An Ecological Approach to International Law: Responding to the Challenges of Climate Change* (Abingdon, Routledge, 2008) 32.

<sup>81</sup> See esp, in this respect, the normative implications that Earth jurisprudence draws from reference to ecology as a science, and esp Cullinan, *Wild Law* (n 77); Burdon, *Earth Jurisprudence* (n 77).

<sup>82</sup> K deLaplante, 'Environmental Alchemy: How to Turn Ecological Science into Ecological Philosophy' (2004) 26(4) *Environmental Ethics* 361.

## D. Two Registers, a Common Envelope?

So, on the one hand, a radical register of engagement with the challenges of the Anthropocene promotes an ecocentric approach set to radically rethink the relation between humanity and nature. Paradoxically, however, this register emphasises the need to consider nature as a subject, largely assuming an unproblematic and unproblematised idea of nature, and it seems to uphold the modern fence between humanity and nature—epistemologically, and, crucially, practically, through concepts such as ecological integrity<sup>83</sup>—and the continued emphasis on protected areas. On the other hand, we have a new conservation attuned to a post-modern, ‘Anthropocenic’ view of nature, and hence apparently more responsive to the need to re-interrogate crucial categories of modernity. Yet, while purportedly moving beyond the anthropocentric/ecocentric binary, it is also still in line with the modern trajectories of mastery and domination, especially when understood, as we shall see later in this chapter, in a biopolitical key.

The differences between the two registers are thus suddenly not as clear-cut as one might have imagined, giving further credibility to the project of critical environmental law, insofar as the latter intends precisely to show the slippages, the incongruences, the contradictions and the complexities that traverse the field of environmental law (and of environmental scholarship). What space is left for critique then, and for a critical environmental law more specifically? The answer lies, I will argue, in a biopolitical reading of environmental law. But what is biopolitics? And how does biopolitics help find a novel critical space that is able to explore the challenges of the Anthropocene without being entangled in either one of the two registers, without being folded within the same envelope? The next sections will explore these questions.

## IV. Biopolitics

The claim made in this chapter, as mentioned, is that biopolitics offers a theoretical and methodological framework better capable of capturing the slippages, incongruences, contradictions and complexities affecting environmental law. It is now time to explore what biopolitics entails. By way of the shortest summary, biopolitics is a mode of government rationality that regulates populations through subsuming life under the care of power.<sup>84</sup> For our purposes, biopolitics is more

<sup>83</sup> Which at least in the articulation promoted by key environmental legal scholars entail a distinction between pristine areas and areas subject to human impacts; see eg L Westra and others, ‘Ecological Integrity and the Aims of the Global Integrity Project’ in D Pimentel, L Westra and RF Noss (eds), *Ecological Integrity: Integrating Environment, Conservation and Health* (Washington, DC, Island Press, 2000).

<sup>84</sup> Biopolitics, particularly in the Foucauldian articulation, is 1 of 2 poles of biopower (the other being anathomopolitics), whereby power disciplines bodies and regulates populations; see eg M. Foucault, *The History of Sexuality. Volume I: an Introduction* (New York, Pantheon Books, 1978).

specifically a mode of governing nature with the objective of achieving ‘overall states of equilibration or regularity’ in relation to its bio-ecological processes.<sup>85</sup> A key methodological benefit of reading environmental law through biopolitics is that from a biopolitical perspective, nature is no longer simply an object of exploitation, but becomes subjected to a series of positive interventions that aim at its optimisation, and at the enhancement of its productive forces.<sup>86</sup> In a biopolitical context, importantly, law proceeds not from a sovereign will, but from a technical norm and from scientific regimes of knowledge.

Yet the dilemma of biopolitics lies in the continuous and perhaps inevitable transformation of the positive care for nature into its subjugation. Combining ecological knowledge with legal principles and institutions, biopolitics facilitates particular forms of management and interventions that, in order to optimise and regularise natural processes, ‘enframe’<sup>87</sup> nature in a grid of multiple systems of surveillance and control that, while trying to protect it, ultimately degrade it.

But biopolitics has another methodological advantage. Environmental law is most often assessed in terms of which view of nature it reflects: anthropocentric or ecocentric.<sup>88</sup> This assessment renders operative a set of binary equivalences that largely categorise anthropocentric law as bad and ecocentric law as good.<sup>89</sup> However, this binary grid is not capable, I claim, of capturing the genealogical complexities and contestations that traverse environmental law in the Anthropocene, complexities that require to appreciate *simultaneously* both negative and positive elements,<sup>90</sup> but without falling into one of two camps, the apologist or the utopian.<sup>91</sup> Relatedly, from the perspective of biopolitics there is no possibility of passing judgement from outside. Indeed the biopolitical declension of power penetrates and enfolds life so that there remains no outside.<sup>92</sup> Biopolitics, moreover, represents arguably the broad horizon of sense within which the entire tradition

<sup>85</sup> M Foucault, *Society Must be Defended. Lectures at the Collège de France 1975–1976* (London, Penguin Books, 2004) 246.

<sup>86</sup> T Lemke, *Biopolitics. An Advanced Introduction* (New York, New York University Press, 2011) 68; see also more generally M Hardt, and A Negri, *Empire. The New World Order* (Cambridge, MA, Harvard University Press, 2000).

<sup>87</sup> The Heideggerian concept of ‘enframing’ indicates a ‘mode of revealing the world which sets it out before [human beings] in a mode of instrumentality and utility that Heidegger famously called “standing-reserve”’; C Wolfe, *Before the Law: Humans and Other Animals in a Biopolitical Frame*, (Chicago, IL, University of Chicago Press, 2013) 3–4. Here biopolitics and anthropocentrism clearly intersect and, indeed, overlap.

<sup>88</sup> D, Wilkinson, ‘Using Environmental Ethics to Create Ecological Law’ in J Holder and D McGillivray (eds), *Locality and Identity: Environmental Issues in Law and Society* (Ashgate and Dartmouth, Dartmouth Pub Co, 1999); Cullinan (n 77); Burdon, *Earth Jurisprudence* (n 77).

<sup>89</sup> For some exceptions, in relation to the so-called ‘weak anthropocentrism’, see B Norton, ‘Environmental Ethics and Weak Anthropocentrism’ (1984) 6(2) *Environmental Ethics* 131.

<sup>90</sup> I have argued at length for the disarticulation of this binary grid in my PhD, esp ch 10; De Lucia, *The Ecosystem Approach in International Environmental Law* (n 8).

<sup>91</sup> See on this dialectic M. Koskeniemi, *From Apology to Utopia. The Structure of International Legal Argument. Reissue with a new epilogue* (Cambridge, Cambridge University Press, 2005).

<sup>92</sup> Hart and Negri, *Empire* (n 86).

of modernity can be organised.<sup>93</sup> To be sure, biopower—or biopolitics—is *only one* vantage or perspective through which modernity can be understood;<sup>94</sup> yet it arguably represents a crucial horizon of sense that finds its most decisive intensification precisely today (in ways that will be explained later), and in relation not only to human populations, but in relation to life in the broadest sense, inclusive of all ecosystem processes and living organisms that are constructed in both science and law as biodiversity.<sup>95</sup> In this sense, and considering the significant overlap of the Anthropocene and modernity, the Anthropocene is biopolitical.

Expanding the concept of biopolitics to encompass the natural environment can be approached from two analytically distinct, but materially inextricable and complementary, perspectives. One entails the expansion of the care for the human population through the inclusion, within the purview of the practices of regularisation enacted through a biopolitical *dispositif*,<sup>96</sup> of all those environmental processes which affect the well-being and the productivity of human populations. The environment can thus be considered to always already within the scope of biopolitics. Indeed, as Rutherford observes, ‘the definition and administration of populations simultaneously requires the constitution and management of the environment in which those populations exist and upon which they depend.’<sup>97</sup> This perspective roughly corresponds to anthropocentric environmental law.

A second perspective, however, is more directly focused on natural entities and populations, and on the direct protection, regularisation and enhancement of *their* life. While still perhaps ultimately linked to the well-being of human populations (and at any rate always inevitably emerging from a human *perspective*) the primary focus is on the protection of the structure, function, health and integrity of ecosystems, and can be read, at least to an extent, together with the recognition of the intrinsic value of nature. This second perspective, in other words, can be characterised as ecocentric. However, even this ecological re-calibration of law and politics can be understood ambivalently not only as a critique of the prevalent, increasing instrumental control of the natural world, but as a new set of normalising strategies *extending* the scope of biopolitical technologies of power to the entire world.<sup>98</sup>

<sup>93</sup> R Esposito, *Bíos: Biopolitics and Philosophy* (Minneapolis, University of Minnesota Press, 2008).

<sup>94</sup> As Esposito himself, a leading advocate of the intrinsic biopolitical foundation of modernity, recognises; *ibid.*

<sup>95</sup> On the ‘construction’ of biodiversity, and its political genealogy, see eg A Kotsakis, *The Biological Diversity Complex: A History of Environmental Government*, PhD Thesis (London School of Economics, 2011) esp chs 2 and 3; D Erasga, ‘Biopolitics: Biodiversity as Discourse of Claims’ in D Erasga (ed), *Sociological Landscape—Theories, Realities and Trends* (Rijeka, Intech, 2012); A Vadrot, *The Politics of Knowledge and International Biodiversity* (London: Routledge, 2014).

<sup>96</sup> That is, that set of governmental apparatuses, including law, that constitute the institutional architecture and operational mechanics of the particular biopolitical regime.

<sup>97</sup> P Rutherford, ‘The Entry of Life into History’; and E Darier, ‘Foucault and the Environment: An Introduction’ in E Darier (ed), *Discourses of the Environment* (London, Blackwell Publishers, 1999) 45.

<sup>98</sup> E Darier, ‘Foucault and the Environment: An Introduction’ (n 97) at 23.

Another important element relates to the co-implicated relation between power and knowledge,<sup>99</sup> and to the role of ecology. In this respect, the expansion of biopolitical regimes to the natural environment is historically contingent on the development of the sciences of biology and, especially, ecology. Ecology in particular has a double (and ambiguous) epistemic role,<sup>100</sup> and its conceptual framework is in fact easily mobilised in defence of highly incompatible projects.<sup>101</sup> In this respect, I have framed elsewhere ecology in terms of a ‘framework of ambiguity’, to emphasise the genealogical complexities underlying its key concepts.<sup>102</sup>

The ambivalence or ambiguity of ecology hinges on the fact that, while ecology has helped problematise the relation between the social and the natural world, and its Cartesian separation, thus casting doubt on the self-image of the modern subject, it has simultaneously ‘provided the political technology for new forms of regulatory intervention in the management of the population and resources’.<sup>103</sup> These new forms of intervention combine in ways that make possible a novel *ecological* governmental rationality that can be applied to the regulatory management of nature; what Rutherford calls ‘ecological governmentality’,<sup>104</sup> and others have called ‘ecopolitics’<sup>105</sup> or ‘ecopower’.<sup>106</sup> In this respect, ecology (in both its scientific and ethical declension) is able to underpin both registers of interpretation of the Anthropocene. Ecology, both Botkin and Cullinan claim, underpins and lends credibility to *their* project.<sup>107</sup>

Ecology (and in particular its relational ontology and its plural epistemology) is thus simultaneously mobilised in support of a radical project of rethink of law and of its categories, and of a ‘bio-economic model’ of nature that provides ‘the “analytic tools” needed to “intensively farm” the Earth’s resources’.<sup>108</sup> It is at this point that we can begin reading environmental law biopolitically.

<sup>99</sup> See eg M Foucault, *Discipline and Punish. The Birth of the Prison*, 2nd edn (London, Vintage Books, 1995) esp 27–28.

<sup>100</sup> D Worster, *Nature’s Economy: The Roots of Ecology*, 2nd edn (Cambridge, Cambridge University Press, 1994); W Sachs, *Global Ecology. A New Arena of Political Conflict* (London, ZED Books, 1993); Darier (n 97).

<sup>101</sup> For examples of how this plays out specifically with regards to the ecosystem approach, see esp A Bell, ‘Non Human Nature and the Ecosystem Approach. The Limits of Anthropocentrism in Great Lakes Management’ (2004) 20(3) *Alternatives Journal* 20; and De Lucia, ‘Competing Narratives and Complex Genealogies’ (n 38).

<sup>102</sup> De Lucia (n 38).

<sup>103</sup> P Rutherford, *The Problem of Nature in Contemporary Social Theory*, PhD Thesis (The Australian National University, 2000) 4.

<sup>104</sup> *ibid.*, 4.

<sup>105</sup> Darier (n 97) at 23.

<sup>106</sup> P Lascoumes, *L’éco-pouvoir Environnements et Politiques* (Paris, La Découverte, 1994).

<sup>107</sup> See respectively Botkin (n 42) and Cullinan (n 77).

<sup>108</sup> P Rutherford, ‘The Entry of Life into History’ in Darier, *Discourses of the Environment* (n 97) at 53. See also D Worster, ‘The Vulnerable Earth: Towards a Planetary History’ (1987) 11(2) *Environmental Review* 87; and Worster, *Nature’s Economy* (n 100), on which Rutherford draws.



## V. Reading Environmental Law Biopolitically

The 'intensive farming' just referred to, while enabled by ecology, is enacted and legitimated through law. In fact, if ecological science's ambivalent role is here made very explicit, for our purposes the centrally relevant element is the equally ambiguous, if not outright and thoroughly complicit, role of environmental law, a role linked primarily to the ways in which environmental law institutionalises knowledge in particular politico-judicial regimes. Environmental law thus legitimises the biopolitical interventions necessary to optimise life and its productivity through the authoritative discourse of (the rule of) law. If ecology, as Rutherford argues, can be understood as the 'rationale behind a new, and increasingly influential, form of political economy',<sup>109</sup> then environmental law becomes crucial in facilitating and providing the legal framework necessary to that new mode of biocapitalism concerned with the construction and maintenance of ecological regimes of accumulation.<sup>110</sup>

The effects of this postmodern scientifico-legal complex<sup>111</sup> thus enable panopticism that subsumes life/nature under a comprehensive 'modality of intervention'.<sup>112</sup> And indeed international environmental law and policy facilitate intense and comprehensive monitoring programs such as the International Biological Program,<sup>113</sup> the Global Census of Marine Life<sup>114</sup> or the Global Taxonomy Initiative.<sup>115</sup> The very notion of biodiversity contains this biopolitical panopticism in its birthmark, even as it moves ambivalently across the demarcation line that apparently separates interventionists and radicals.

What I wish to underline here is particularly the fact that both the concept of biological diversity and conservation biology (the branch of science that articulated the notion of biodiversity and its normative inflection)<sup>116</sup> can be understood biopolitically.<sup>117</sup> The tactics of conservation biology are concretised in a series of prescriptions and interventions aimed at 'the defence of life', regardless of whether conservation takes an anthropocentric or ecocentric ethical approach.<sup>118</sup> For

<sup>109</sup> Rutherford, *The Problem of Nature in Contemporary Social Theory* (n 103) at 134.

<sup>110</sup> M Paterson, 'Legitimation and Accumulation in Climate Change Governance' (2010) 15 *New Political Economy* 345.

<sup>111</sup> Holder, 'New Age: Rediscovering Natural Law' (n 32).

<sup>112</sup> Rutherford (n 103) at 140.

<sup>113</sup> Aimed at 'understanding the biological basis of productivity and human welfare'; *ibid.*, 135.

<sup>114</sup> 'A 10-year international effort undertaken in to assess the diversity (how many different kinds), distribution (where they live), and abundance (how many) of marine life [that] produced the most comprehensive inventory of known marine life ever compiled and cataloged' [www.coml.org/about-census](http://www.coml.org/about-census).

<sup>115</sup> Aimed at removing the so-called 'taxonomic impediment', ie the lack of taxonomic knowledge, allegedly a key to the conservation of biological diversity, [www.cbd.int/gti/default.shtml](http://www.cbd.int/gti/default.shtml).

<sup>116</sup> Kotsakis, *The Biological Diversity Complex* (n 95); Erasga, 'Biopolitics' (n 95).

<sup>117</sup> C Biermann and B Mansfield, 'Biodiversity, Purity, and Death: Conservation Biology as Biopolitics' (2014) 32(2) *Environment and Planning D: Society and Space* 252.

<sup>118</sup> *ibid.*, 257.

example, the global biodiversity census proposed by famous conservation biologist Edward Wilson with the goal of protecting biodiversity from the ongoing extinction crisis, can be understood as a form of ‘panopticism’ which, through its processes of ‘identification, collection of specimens, and subsequent research [...] neatly packages’ non-human nature into a set of designations which, in turn, *simultaneously* facilitate ‘conservation *and* commodification.’<sup>119</sup> These types of programs are arguably necessary in order to protect natural ecosystems, and yet they also subsume nature within a grid of control that subdues them while trying to conserve and sustainably optimise them. Youatt argues in this respect that from the biopolitical perspective embodied in practices such as the global biodiversity census, ‘nonhumans are regulated and rationalised in matrices of knowledge and science, through which they are readied as productive resources for capitalism and mined as repositories of genetic information.’<sup>120</sup>

This biopolitical project of panoptical surveillance, and the related aporia that constantly and incessantly transforms the care for life into its destruction, are in fact inscribed in the very birthmark of sustainable development—a key concept in environmental law. The Report of the World Commission on Environment and Development, envisioned a ‘planetary management’ enacted through the establishment of surveillance mechanisms aimed at monitoring ‘the vital signs of the planet’ so as to ‘aid humans in protecting its health.’<sup>121</sup> Indeed, the discourse of ecosystem (or ecological) health has become central (despite its ambiguities)<sup>122</sup> in the context of environmental law (along with the intertwined discourse of integrity; indeed the two are considered by some ‘inseparable’).<sup>123</sup> Environmental law in this respect, facilitates ‘an extension of “biopolitics” [...] to all life-forms,’<sup>124</sup> and can be ultimately understood as a ‘normalizing strategy’ attempting ‘to extend control (“management”) to the entire planet.’<sup>125</sup>

A key example to further support the argument outlined in this chapter is offered by the ecosystem approach, as it captures the slippages that traverse and complicate both the interventionist and the radical register. In the most general terms (and regardless of the complexities involved),<sup>126</sup> the ecosystem approach

<sup>119</sup> R Youatt, ‘Counting Species: Biopower and the Global Biodiversity Census’ (2008) 17(3) *Environmental Values* 393.

<sup>120</sup> *ibid*, 394.

<sup>121</sup> WCED, *Our Common Future: Report of the World Commission on Environment and Development*, 4 August 1987, UN Doc A/42/427, 1987, para 56.

<sup>122</sup> See esp Lackey, ‘Appropriate Use of Ecosystem Health and Normative Science in Ecological Policy’ (n 28); E Hearnshaw, R Cullen and K Hughey, ‘Ecosystem Health Demystified: an Ecological Concept Determined by Economic Means’ (Conference paper presented at the Economics and Environment Network Workshop, Australian National University, Canberra, 4–6 May 2005); De Lucia (n 38).

<sup>123</sup> R Siron and others, ‘Ecosystem-Based Management in the Arctic Ocean: A Multi-Level Spatial Approach’ (2008) 61 *Arctic* 86, 87.

<sup>124</sup> Rutherford 1993, quoted in Darier (n 97) at 23.

<sup>125</sup> Sachs, *Global Ecology* (n 100), quoted in Darier (n 97) at 23.

<sup>126</sup> See eg De Lucia (n 38).

can be characterised as a legal and governance ‘strategy for the integrated management of land, water and living resources.’<sup>127</sup> The ecosystem approach, built on the concept of ecosystem (that is, the ‘dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit’)<sup>128</sup> promotes integration, challenging the traditionally fragmentary approach of environmental law, and promoting a transversal ecosystem perspective cutting across fragmented jurisdictional, political and social boundaries and domains. The ecosystem approach transplants, importantly, a number of central ecological principles into law, and some argue that it is the clearest evidence of a shift from an outdated anthropocentric legal framework, to an ecocentric one attuned to ecology as both a science and as a new ethico-philosophical paradigm.<sup>129</sup> The ecosystem approach seems to move past both ‘classic’ and ‘modern’ articulations of environmental law<sup>130</sup> and towards an ‘ecological’ form or mode of law that, incorporating an ecocentric ethics, signals the shift to a new phase of its development, a phase which, as has been noted, is ‘little short of a paradigm shift’.<sup>131</sup> The ecosystem approach may then offer an answer to calls for an urgent and complete rethink of law in the Anthropocene.

Yet the ecosystem approach, I argue, embodies *precisely* the biopolitical aporia investing environmental law, and illustrates how the two registers discussed above are easily enveloped within the same biopolitical horizon. By way of example,<sup>132</sup> first, while the ecosystem approach embraces the need for protecting both the ecological integrity and the ecological health of ecosystems, such a goal requires a comprehensive system of ecosystem monitoring/surveillance in order to be achieved, and is furthermore inscribed within the broader systemic goal of sustainable development. Secondly, the ecosystem approach also promotes an ecological geography (ie a geography of conservation based on ecosystem boundaries rather than political jurisdictions) and yet simultaneously enables the subjection of nature to a transnational management through global and regional programs that extracts sovereignty from states and redistributes it across a range of global institutions and legal regimes. Thirdly, while recognising that humans are inevitably immersed in nature, the ecosystem approach simultaneously makes possible the organisation of nature as a productive resource through the framework of ecosystem services, leading to that enframing that the ecosystem approach, in its more holistic and ecocentric inflection, apparently leaves behind. The ecosystem

<sup>127</sup> COP Decision V/6 ‘Ecosystem Approach’ adopted by the Conference of the Parties to the Convention of Biological Diversity at its Fifth meeting, Nairobi, 15–26 May 2000, UNEP/COP/5/23.

<sup>128</sup> Art 2 of the Convention on Biological Diversity, 1760 UNTS 79.

<sup>129</sup> See eg already E Grumbine, ‘What is Ecosystem Management?’ (1994) 8(1) *Conservation Biology* 27, but also, more recently, R Brooks, R Jones and R Virginia, *Law and Ecology: The Rise of the Ecosystem Regime* (Aldershot, Ashgate, 2002).

<sup>130</sup> This distinction in ‘phases’ of environmental law is Jane Holder’s, Holder (n 32).

<sup>131</sup> *ibid*, 167.

<sup>132</sup> The full argument is developed in my PhD; De Lucia (n 8). Some of these contradictions are discussed also in De Lucia (n 38).

approach, in other words, can be located precisely at that juncture where, through a multiplicity of slippages, incongruences and contradictions the interventionist and the radical register intersect and overlap.

From the preceding it should have become apparent how there is a 'zone of irreducible indistinction'<sup>133</sup> where the two discourses of the Anthropocene meet and become entangled. Both an ecocentric approach to conservation and a methodological programme of surveillance and intervention to protect nature follow from the same logic and remain entangled despite their apparently opposite project. This is precisely the aporetic logic of biopolitics, a logic that has no outside. A space for critique, then, can only be found inside biopolitics, in the midst of the complexities and contestations involved.

## VI. Conclusions

As this chapter has attempted to show, critique in the Anthropocene can no longer rely on the key referents of modernity. In the Anthropocene, knowledge is plural and uncertain, nature no longer beyond contestation, and values in continuous conflict. Yet those key referents remain implicitly operative in both anthropocentrism and ecocentrism. In the Anthropocene, however, they are no longer sufficient, and rather counter-productively perpetuate binary polarisations that prevent to find a truly novel space and language for critique.

Environmental law, I have argued, cannot be neatly aligned with any one project, as no project is fully coherent or free from slippages, incongruences, contradictions or genealogical complexities. Environmental law needs to be recognised then as a complex biopolitical field. This recognition of the biopolitical character of environmental law, and of the totalising reach of biopower (of which biopolitics is a specific declension), allows instead to articulate a critique that cuts across that zone of indistinction where biopolitics neutralises ecocentric critiques by continuously reproducing an aporetic logic that transforms every attempt at protecting nature into its opposite.

A biopolitical reading has furthermore the key advantage of allowing reading environmental law *simultaneously* negatively and positively, to the extent that life, situated at the 'moving margins' of intersection and tension between biology and history,<sup>134</sup> knowledge and nature, ecology ethics and law, is both enhanced and subjugated by power in the same gesture.<sup>135</sup> The key question in the Anthropocene is then not to identify a static truth external to the current state of affairs—that

<sup>133</sup> Agamben, *Homo Sacer* (n 45).

<sup>134</sup> Esposito, *Bios* (n 93) at 31.

<sup>135</sup> *ibid.*, 37.

is, a transcendent utopia<sup>136</sup>—in order to enact a righteous closure, but to explore a dynamic process of critique from within, in order to enable responsive and responsible participation to the juridical field of discursivity where environmental law is constantly made and remade, on the part of the critical legal scholar or practitioner. Critical environmental law, through biopolitics, in other words, does not level a critique from outside, but articulates its critique inside *and* against the current biopolitical paradigm. In the Anthropocene, critique needs to divaricate the incongruences and contradictions of environmental law; needs to embrace and leverage its complexities, and to exploit its slippages. Through the language of biopolitics (critical environmental) legal scholars will be able to disentangle law and legal strategies, thought and practice, ‘from the constraints imposed by the tradition of’ modernity,<sup>137</sup> embedded in the language of anthropocentrism and ecocentrism. By rupturing the biopolitical envelope, critical environmental law opens space for a critical new legal language for the Anthropocene.

<sup>136</sup> Utopias are ‘unreal places’ where a society can imagine itself in ‘a perfected form’; M Foucault, ‘Of Other Spaces: Utopias and Heterotopias’ in N Leach (ed), *Rethinking Architecture: A Reader in Cultural Theory* (New York, Routledge, 1997) 332.

<sup>137</sup> Pieraccini (n 43).