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Beyond anthropocentrism and ecocentrism: a biopolitical reading of environmental law

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The 'rise of ecosystem regimes' is increasingly seen as the key for the resolution of the unfolding ecological crises that are the mark of the Anthropocene. These ecosystem regimes are seen as a crucial passage in resolving environmental law's internal contradictions and evident shortcomings. Indeed, ecosystem regimes are understood to signal a crucial step in a long progression from anthropocentric to ecocentric articulations of environmental law. This narrative, whether in normative or descriptive terms, informs much, and perhaps most, environmental legal scholarship. In this article I intend to problematize this linear narrative through an 'analytics of biopolitics'. Situated within the critical space tentatively called 'critical environmental law', this approach aims at opening the field of inquiry rather than producing closures. Rather than a simplified, linear narrative of increasing interpenetration between law and ecology – a narrative where law becomes, or ought to become, increasingly ecocentric – an analytics of biopolitics transposed to the specific critical environmental legal terrain aims at outlining the slippages that intervene at the margins of intersection between law and ecology, and at articulating a biopolitical critique of both 'anthropocentric' and 'ecocentric' articulations of environmental law.

Keywords: *environmental law, biopolitics, anthropocentrism, ecocentrism, critical legal theory*

1 INTRODUCTION

Until the early 1970s, law and ecology had not come together to produce a specialized field of law, namely environmental law. The first milestone and perhaps the very 'opening act' of environmental law as such was the UN Conference on the Human Environment, held in Stockholm in 1972, where key concepts and principles inaugurated a new and recognizable environmental legal discourse.[1] These concepts and principles animated the global environmental agenda in various ways for the next two decades, and eventually matured into the central principles of contemporary

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1. Such as the concept of ecosystem, the concept of integration, the concept of sustainable development (though not called by that name yet), the duty not to cause transboundary harm (already formulated in the Trail Smelter case, but now firmly framed in a multilateral environmental context), etc. The overall frame of the Conference, and of the Declaration adopted therein, was the need to identify a 'common outlook and for common principles to inspire and guide the peoples of the world in the preservation and enhancement of the human environment', Declaration of the United Nations Conference on the Human Environment, U.N. Doc. A/Conf.48/14/Rev. 1 (1973), incipit.

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international environmental law, enshrined in the 1992 Rio Declaration.[2] Environmental law has since enjoyed sweeping success, at least if success is to be measured in quantitative terms.[3] The primary task of law in relation to the environment is to regulate the conduct of relevant actors and to elaborate the normative and regulatory framework necessary to address ecological problems that simultaneously traverse local, regional and global scales: climate change, toxic waste, pollution of air, water and soils and biodiversity loss.[4]

However, and despite that quantitative success, legal scholarship increasingly suggests that environmental law (at all its levels of articulation: domestic, supranational, international) suffers from decisive structural inadequacies that prevent it from meaningfully addressing contemporary ecological emergencies.[5] Besides the practical difficulties arising from an excessive proliferation of environmental legislation (a phenomenon leading to what some scholars have called 'treaty congestion'),[6] some of the problems affecting environmental law are inscribed at its very core, and produce what M'Gonigle and Takeda describe as the 'deep contradiction' of environmental law:[7] while self-reflexively aware of how the 'environmental problematic' can only be addressed by exploring and addressing its root causes through a change in paradigm, '*environmental law itself does not address this problematic; it operates within it*'.[8]

This contradiction is the result of the fact that environmental law is located at an epistemological crossroads. On the one hand, environmental law has emerged within the historical coordinates of a particular socio-cultural paradigm (modernity).[9]

2. Rio Declaration on Environment and Development, U.N. Doc. A/Conf.151/26 (Vol. I).
3. The extreme proliferation of environmental legislation prompted scholars to speak of a 'treaty congestion' that is leading to 'deleterious effects on efficacy and efficiency of environmental governance', E Brown-Weiss, 'International Environmental Law: Contemporary Issues and the Emergence of a New World Order' (1993) 81 Georgetown Law Journal 675, at 675. See also B Hicks, 'Treaty Congestion in International Environmental Law: The Need for Greater International Coordination' (1998–1999) 32 University of Richmond Law Review 1643. Treaty congestion affects also specific sectors, such as global forest governance, as discussed by H Hoogeveen and P Verkooijen, 'Transforming Global Forest Governance' (2001) 28(5) Review of Policy Research 501.
4. See, amidst a growing sea of evidence, Millennium Ecosystem Assessment, *Ecosystems and Human Well-being: Synthesis* (Island Press, Washington, DC 2005).
5. See, among a growing literature, M M'Gonigle and L Takeda, 'The Liberal Limits of Environmental Law: A Green Legal Critique' (2013) 30(3) Pace Environmental Law Review 1005; M Wood, 'Advancing the Sovereign Trust of Government to Safeguard the Environment for Present and Future Generations (Part I): Ecological Realism and the Need for a Paradigm Shift' (2009) 39(1) Environmental Law Review 43; K Bosselmann, 'Losing the Forest for the Trees: Environmental Reductionism in the Law' (2010) 2(8) Sustainability 2424; J Holder, 'New Age: Rediscovering Natural Law' (2000) 53(1) Current Legal Problems 151; A Grear, 'The Vulnerable Living Order: Human Rights and the Environment in a Critical and Philosophical Perspective' (2011) 2(1) Journal of Human Rights and the Environment 23.
6. This 'treaty congestion' is arguably leading to 'deleterious effects on efficacy and efficiency of environmental governance', Brown-Weiss (n 3) at 675. See also Hicks (n 3). Treaty congestion affects also specific sectors, such as global forest governance, as discussed by Hoogeveen and Verkooijen (n 3).
7. M'Gonigle and Takeda (n 5) at 1005.
8. M'Gonigle and Takeda (n 5) 1020, emphasis in the original.
9. The idea of modernity is complex and contested. For the purpose of this paper, I follow Boaventura de Sousa Santos, who frames modernity as a particular sociocultural paradigm, B de Sousa Santos, *Toward a New Common Sense: Law, Science and Politics in the*

As such, environmental law is infused with particular epistemological assumptions and cultural values.[10] Environmental law, consequently, is thoroughly implicated in the modern domination and 'othering' of nature[11] and reproduces the modern 'epistemology of mastery' – that is, an epistemological stance whereby knowledge is mobilized towards the material control and domination of nature.[12] Versions of this narrative may vary in some of the details,[13] but legal scholarship as a whole increasingly suggests that the central source of these structural inadequacies is *anthropocentrism*.[14] On the other hand, environmental law has become increasingly porous to various forms of 'ecologism',[15] thus offering a channel for the postmodern demands of the ecological crises to find a way into law.[16] Such approaches generally suggest that if the structural inadequacies of environmental law derive from its anthropocentrism, then the solution to its deep problematic lies in its ecocentric re-orientation. This narrative, which operates in accordance with a binary and linear logic, is sometimes expressed in normative terms (ecocentrism *ought to* replace anthropocentrism) and sometimes in descriptive terms (ecocentrism *is* replacing anthropocentrism) – albeit in most cases the two perspectives overlap.

In this article, I wish (a) to problematize this narrative, which, I shall argue, has a number of theoretical shortcomings, and (b) to point to a novel way of framing and understanding the environmental legal problematic. In order to do that, I will deploy the theoretical and methodological tool called 'analytics of biopolitics', which combines the conceptual framework of biopolitics and the method of genealogy.[17] This analytics of biopolitics will help to disarticulate the simplified, linear narrative according to

Paradigmatic Transition (Routledge, London 1995) at 1. However, modernity is not understood (primarily) as a historical period, but rather more interestingly as a mode of understanding and conceiving the world that *exceeds* its historical coordinates (thus G De Anna, 'Modernità e Immanenza: l'Azione Umana in Tommaso D'Aquino e Thomas Hobbes', in L Parisoli (ed), *Il Soggetto e la Sua Identità. Mente e Norma, Medioevo e Modernità* (Officina di Studi Medievali, Palermo 2010). Similarly, Foucault described modernity as an 'attitude', M Foucault, 'What is Enlightenment?', in P Rabinow (ed), *Ethics: Subjectivity and Truth (Essential Works of Foucault 1954–1984, volume 1)* (Penguin Books, London 2000) at 309.

10. V De Lucia, 'Towards an Ecological Philosophy of Law: A Comparative Discussion' (2013) 4(2) Journal of Human Rights and the Environment 167; Grear (n 5).

11. De Lucia (n 10); Grear (n 5); Holder (n 5).

12. See eg W Leiss, *The Domination of Nature* (McGill-Queens University Press, Montreal and Quebec 1994) and, more recently, S Adelman, 'Epistemologies of Mastery', in A Grear and L Kotzé (eds), *Research Handbook on Human Rights and the Environment* (Edward Elgar, Cheltenham 2015).

13. See examples of these variations over the same theme, C Cullinan, *Wild Law: A Manifesto for Earth Justice* (Siber Ink, South Africa 2002); M'Gonigle and Takeda (n 5); K Bosselmann, *The Principle of Sustainability: Transforming Law and Governance* (Ashgate, Aldershot 2008).

14. A Gillespie, *International Environmental Law, Policy and Ethics* (Clarendon Press Oxford, Oxford 1997); P Taylor, *An Ecological Approach to International Law: Responding to Challenges of Climate Change* (Routledge, London 1998); Bosselmann 2010 (n 5) and Bosselmann (n 13); Grear (n 5).

15. See eg M Tallacchini, *Diritto per la Natura. Ecologia e Filosofia del Diritto* (Giappichelli Editore, Torino 1996).

16. Environmental law, is in fact in many respects considered to express a legality attuned to postmodernity, see eg N De Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules* (Oxford University Press, Oxford 2002).

17. T Lemke, *Biopolitics: An Advanced Introduction* (New York University Press, New York 2011) Chapter 9, at 177ff.

which there is an increasing interpenetration between law and ecology leading to law becoming increasingly ecocentric. The binary logic deployed by such an account, and premised on anthropocentrism and ecocentrism, I shall argue, is too coarse to capture the complexities, ambiguities and contradictions inherent in environmental law as a 'hot' field of law.[18] Biopolitics, by contrast, helps precisely to understand law in its ecological mode of operation by capturing its plurality of registers and by registering the ambiguities, contradictions and aporias that traverse environmental law in ways that exceed, transcend and trespass the binary logic of 'anthropocentrism versus ecocentrism' in multiple ways.

Ultimately, the goal of this article is to problematize *both* 'anthropocentric' and 'ecocentric' narratives of environmental law and consequently the binary logic underpinning them and animating most environmental legal scholarship. In order to do that, the article is structured as follows. In section 2, I show how the discourse of environmental law, particularly in its international articulation, is caught between anthropocentrism and ecocentrism. In section 3, I problematize this binary narrative, in order to show its inability to capture and navigate the complexities traversing environmental law. In section 4, I present my methodological and theoretical framework, and explain genealogy and biopolitics (4.1) and an ecological declension of biopolitics (4.2). In section 5, I offer a biopolitical reading of international environmental law, and in section 6, I offer some conclusions and a set of questions indicating a minimal future research agenda.

2 ENVIRONMENTAL LAW BETWEEN ANTHROPOCENTRISM AND ECOCENTRISM

Most legal scholarship increasingly suggests that the central problem of environmental law is its anthropocentrism. By simple reference to the literal meaning of the word, anthropocentrism indicates the centrality of human beings in the world.[19] More comprehensively, anthropocentrism entails the view that nature, in all its forms, 'exist[s] or [is] available for man's benefit [and] that man is entitled to manipulate the world … in his interest'.[20]

18. Environmental law is considered 'hot law' in so far 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, at 347–8.

19. According to the Oxford Advanced Learner's Dictionary online, anthropocentrism indicates the 'belief that humans are more important than anything else', <http://www.oxfordlearnersdictionaries.com/definition/english/anthropocentrism> accessed 13 September 2016. It must be underlined that anthropocentrism is not a monolithic concept. There exist rather a variety of positions that can be described as anthropocentric, ranging from full-blown resourcism (see eg P Curry, 'Re-Thinking Nature: Towards an Eco-Pluralism' (2003) 12(3) Environmental Values 337) to softer forms of stewardship (see eg R Worrell and M Appleby, 'Stewardship of Natural Resources: Definition, Ethical and Practical Aspects' (2000) 12(3) Journal of Agricultural and Environmental Ethics 263).

20. B Norton as quoted in B Minteer, *Nature in Common? Environmental Ethics and the Contested Foundations of Environmental Policy* (Temple University Press, Philadelphia 2009). See also P Curry, *Ecological Ethics: An Introduction* (2nd edition, Polity, Cambridge 2011), which emphasizes the 'unjustified privileging of human beings … at the expense of other forms of life', at 55. Embedded at the core of anthropocentrism there are also other

As early as the 1990s, in a sustained and detailed account, Alexander Gillespie explored and exposed the pervasiveness of anthropocentrism in international environmental law.[21] The protection of the environment, he found, is grounded on a fundamental anthropocentrism that may, and indeed does, take a variety of more specific articulations. Gillespie isolated the following anthropocentric justifications for environmental protection: self-interest; economics; religion; aesthetics, culture and recreation; and the rights of future generations.[22] Today, environmental legal scholars, regardless of theoretical or methodological inclination, increasingly find a common unifying premise in the recognition that the unfolding ecological crises are the result of the anthropocentric foundation of environmental law, and a product of the anthropocentric worldview of western modernity. This western anthropocentric tradition, as both Bosselmann[23] and Philippopoulos-Mihalopoulos[24] underline, is even inscribed in the very adjective *environmental*, which indicates the dominance of a (human) centre. And law, as a 'significant description of the way a society perceives itself and projects its image to the world',[25] is ultimately part of the problem: 'the legal order' – and this is a theme with many variations – reflect[s] a harmful and outdated anthropocentric worldview'.[26] Such critique of the anthropocentrism of environmental law however, is usually also accompanied by the articulation of a way forward. This way forward is ecocentrism.[27]

If environmental law is deeply entangled with the anthropocentrism of modernity, it is also now receptive to the demands of a variety of 'ecologisms'.[28] In this respect environmental law looks to ecology both as a postmodern epistemology[29] and as a new ethical framework[30] in order to find its *raison d'être* and a normative, epistemological and ethical reference framework adequate to meet contemporary challenges.

Ecology has in this sense made possible a transformation (not complete, nor comprehensive yet, but arguably ongoing) of environmental law,[31] and has led to the 'rise

assumptions: the rational legal subject is paradigmatically white and male, see A Grear, 'Deconstructing Anthropos: A Critical Legal Reflection on "Anthropocentric" Law and Anthropocene "Humanity"' (2015) 26(3) Law and Critique 225.

21. Gillespie (n 14); see also Taylor (n 14).
22. Gillespie ibid, respectively Chapters 2, 3, 4, 5 and 6.
23. Bosselmann (n 13).
24. A Philippopoulos-Mihalopoulos, 'Actors or Spectators? Vulnerability and Critical Environmental Law' (2013) 3(5) Oñati Socio-Legal Series 854.
25. P Burdon, 'Wild Law: The Philosophy of Earth Jurisprudence' (2010) 35(2) Alternative Law Journal 58, at 58.
26. P Burdon, *Earth Jurisprudence: Private Property and Earth Community* (PhD Thesis, Adelaide Law School the University of Adelaide, 2011) at 131.
27. Thus especially Taylor (n 14); Cullinan (n 13); Bosselmann (n 13); Burdon (n 26). See also, however, Tallacchini (n 15) who rather supports, following Bryan Norton, a 'weak anthropocentrism'.
28. Shallow, deep, bright or dark green, etc., see Tallacchini (n 15).
29. K deLaplante, 'Is Ecosystem Management a Postmodern Science?' in K Cuddington and B Beisner (eds), *Ecological Paradigms Lost: Routes of Theory Change* (Elsevier Academic Press, Burlington, MA 2005).
30. K deLaplante, 'Environmental Alchemy: How to Turn Ecological Science into Ecological Philosophy' (2004) 26(4) Environmental Ethics 361. In this respect it is perhaps useful to underline the fact that the very discipline of environmental ethics (at least in its mainstream articulation) is ultimately 'a set of critiques … of the anthropocentric worldview', D Keller (ed) *Environmental Ethics: The Big Questions* (Wiley-Blackwell, Malden, MA 2010) at 62.
31. D Tarlock, 'The Nonequilibrium Paradigm in Ecology and the Partial Unraveling of Environmental Law' (1994) 27 Loyloa L.A. Law Review 1009; S Emmenegger and

of ecosystem regimes'.[32] Understood as regimes where 'the science of ecology is applied through environmental laws',[33] ecosystem regimes are considered to signal a crucial step in a long transformation of environmental law along a path that leads – or should lead, or so it is thought – from anthropocentrism to ecocentrism,[34] and from environmental law to ecological law.[35] Thus, environmental legal scholars, whether by way of descriptive or normative arguments, increasingly submit that the solution to anthropocentric law is the re-calibration or radical re-orientation of environmental law in an ecocentric sense. Ecocentrism here simultaneously indicates: (a) an ethical position where nature is recognized as having intrinsic value; and (b) an epistemological position reflecting ecology's relational and holistic understanding of 'nature' and its ecosystems, of which humans are but a part.

Accordingly, and despite the clear predominance of anthropocentrism as the underlying ontological, epistemological and ethical framework of environmental law,[36] some commentators identify a significant evolution taking place in the manner in which law understands, translates and accommodates 'nature' within its normative and regulatory framework. This evolution is usually framed in terms of a linear narrative whereby the relationship between law and ecology goes through various stages, characterized by Brooks, Jones and Virginia as 'quarrel', 'initial embrace', 'courtship' and 'marriage'.[37] Emmenegger and Tschentscher suggest, for example, that there is an ongoing progression 'from a purely anthropocentric vision … to acknowledging an intrinsic value of nature', marking 'a change of the predominant paradigm in international environmental law'.[38] Similarly, Gillespie, while offering a sharp critique of the anthropocentrism of international environmental law, as we have seen earlier, also explores what he calls the 'growth of new non-anthropocentric ideals within international environmental law'.[39] Bosselmann, in turn, while underlining environmental

A Tschentscher, 'Taking Nature's Rights Seriously: The Long Way to Biocentrism in Environmental Law' (1994) 6(3) Georgetown International Environmental Law Review 545, at 547–8; J Brunnée and S Toope, 'Environmental Security and Freshwater Resources: A Case for International Ecosystem Law' (1994) 5(1) Yearbook of International Environmental Law 41; Gillespie (n 14); R Brooks, R Jones and R Virginia, *Law and Ecology: The Rise of the Ecosystem Regime* (Ashgate, Burlington 2002).

32. Brooks, Jones and Virginia (n 31).

33. Ibid 369.

34. See, *ex pluribus*, Emmenegger and Tschentscher (n 31); Brunnée and Toope (n 31); Gillespie (n 14); Brooks, Jones and Virginia (n 31); Bosselmann (n 13).

35. This latter terminological transformation (from environmental to ecological law) is, as Bosselmann in particular argues, a key shift for law, to the extent that terminology is reflective of what he calls an 'ethical dilemma', Bosselmann (n 13) at 94. This however is a normative rather than descriptive argument, see eg 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.

36. Gillespie (n 14); Taylor (n 14); D Wilkinson, 'Gille Environmental Ethics to Create Ecological Law', in J Holder and D McGillivray (eds), *Locality and Identity: Environmental Issues in Law and Society* (Dartmouth Pub Co, Dartmouth 1999); Bosselmann (n 13).

37. See eg Brooks, Jones and Virginia (n 31) 369.

38. Emmenegger and Tschentscher (n 31) at 547–8.

39. This is the title of Chapter 8 of Gillespie (n 14). Gillespie considers three such emerging ideals, albeit 'still in only the most rudimentary of stages' (at 127): the moral considerability of animals; respect for life; and the land ethic. In a recent second edition of his book, Gillespie speaks also of species and ecosystems, A Gillespie, *International Environmental Law, Policy and Ethics* (2nd edition, Oxford University Press, Oxford 2014).

law's moral pluralism, also assumes that this linear progression (and the dichotomy that underpins it)[40] is at work, as is evident in the language he uses when underlying the co-existence of '*traditional* anthropocentric instruments of "natural resource management"' and of more '*modern* ecocentric instruments of ecosystem management'.[41]

It is now undeniable, in the light of such developments, that crucial ecological concepts (the concept of ecosystem, the concept of ecosystem integrity, the concept of biological diversity) have gained prominence both in legal instruments[42] and scholarly literature,[43] and increasingly shape environmental law.[44]

These developments, and their related discourse of ecocentrism, as has already been noted, indicates *both* the increasing translation of scientific ecological principles into law *and* the reformulation of an ecological ethics premised on the intrinsic value of nature (rather than on its instrumental value). Bosselmann indicates this particular convergence when he observes how the ecosystem approach is a perfect example of an ecocentric approach in law.[45] Accordingly, a few words on this approach are in order.

The ecosystem approach offers a particularly salient example of how the process of the 'ecocentrization' of law, in both its scientific and ethical dimension, is playing out. The ecosystem approach, it is claimed,[46] is 'little short of a paradigm

40. Indeed, Bosselmann distinguished between environmental (that is, anthropocentric) and ecological (ecocentric) approaches in law and governance, Bosselmann (n 13) at 94.
41. Bosselmann (n 13) at 93, emphasis mine. See also Kim and Bosselmann (n 35).
42. Ecosystems are explicitly considered one element of biological diversity (CDB, art 2, 'biological diversity'), and the ecosystem approach, premised on the concept of ecosystem, is increasingly adopted in international environmental law as the management and governance model of choice, see eg R Long, 'Legal Aspects of Ecosystem-Based Marine Management in Europe', in A Chircop, ML McConnell and S Coffen-Smou (eds), *Ocean Yearbook* (Martinus Nijhoff, The Hague 2012) and V De Lucia, 'Competing Narratives and Complex Genealogies: The Ecosystem Approach in International Environmental Law' (2015) 27(1) Journal of Environmental Law 91. As for ecosystem integrity, the first (international) legal regime to employ the notion of ecosystem integrity was the Great Lakes Water Quality Agreement, which defines it in article II as 'the chemical, physical, and biological integrity of the waters of the Great Lakes Basin Ecosystem', Agreement between Canada and the United States of America on Great Lakes Water Quality, 1978 (30 UST 1383) (hereinafter Great Lakes Water Quality Agreement, 1978), article II.
43. See eg Bosselmann (n 13); K Bosselmann, 'The Rule of Law Grounded in the Earth: Ecological Integrity as a *Grundnorm*', in L Westra and M Viela (eds), *The Earth Charter, Ecological Integrity and Social Movements* (Routledge/Earthscan, New York 2014) and R Kim and K Bosselmann, 'Operationalizing Sustainable Development: Ecological Integrity as a Grundnorm of International Law' (2015) 24(2) Review of European, Comparative & International Environmental Law 194.
44. As Gillespie underlines in a revised version of his critique of international environmental law, 'International environmental law and policy is increasingly thinking in terms of ecosystems', Gillespie (n 39) at 138.
45. Bosselmann (n 13) at 93. Bosselmann uses the term 'ecosystem management', while I prefer the term 'ecosystem approach'. The two terms however can be considered, for the purpose of this paper, interchangeable. For a detailed review of terminological issues as regards the ecosystem approach, see De Lucia (n 42).
46. See S Kidd et al., 'The Ecosystem Approach and Planning and Management of the Marine Environment' in S Kidd, A Plater and C Frid, *The Ecosystem Approach to Marine Planning and Management* (Routledge, London 2011) who state that 'we are in the midst of a paradigm shift in planning and management of the natural environment and resources' derived from it, at 1; C Galindo-Leal and F Bunnell, 'Ecosystem Management: Implications and Opportunities of a New Paradigm' (1995) 71 The Forestry Chronicle 601; M Goldman,

shift',[47] moving environmental law beyond both 'classic' and 'modern' articulations[48] and heralding a new (ecocentric) phase. The ecosystem approach, responsive as it is to an ecological (relational and holistic) view of the world, promotes integration, challenging the traditionally fragmentary approach of environmental law. It integrates laws that regulate living resources with laws that regulate the pollution and degradation of the physical environment; it integrates, within a transversal ecosystem perspective, fragmented jurisdictional and political boundaries; it also integrates the social and the ecological, the natural and the cultural in a unified, holistic perspective. For reasons of space, I cannot elaborate further.[49] What is important to keep in mind for present purposes, however, is that the ecosystem approach incorporates a number of central ecological principles in law,[50] and arguably represents, together with the emerging notion of the legal subjectivity of natural entities,[51] the most comprehensive articulation of the ecocentric paradigm into law.[52] I will therefore return to the ecosystem approach later, but first, it is important to problematize the underlying dominant framework of analysis based on the anthropocentrism-ecocentrism binary.

3 PROBLEMATIZING THE ANTHROPOCENTRISM–ECOCENTRISM BINARY

The preceding section has outlined the standard narrative through which legal scholarship first criticizes and then seeks to redeem environmental law in a move from anthropocentrism (the problem) to ecocentrism (the solution). This section intends to problematize this binary narrative. It does so by problematizing its two key concepts: anthropocentrism and ecocentrism. I argue that their respective shortcomings make them unsuitable to explore and explain the inherently complex, ambiguous and contradictory field of environmental law, despite the residual utility they each undeniably maintain. Drawing on some recent and insightful scholarship[53] and further

P Nadasdy and M Turner (eds), *Knowing Nature: Conversations at the Intersection of Political Ecology and Science Studies* (University of Chicago Press, Chicago 2011) at 140, who observe how the notion of 'paradigm shift' is increasingly invoked in wildlife management literature, where the ecosystem approach has an increasingly important role; FAO, *Fisheries Management. The Ecosystem Approach to Fisheries.* FAO Technical Guidelines for Responsible Fisheries, 2003 (No 4, Suppl. 2.).

47. Holder (n 5) at 167.

48. Jane Holder discusses two preceding phases of environmental law as, respectively, classic and modern. The classic phase (1850s–1960s) follows the rationale of the immediate human self-interest; the modern phase, which begins in the early 1970s enlarges its scope by encompassing also the interests of future generations and its central frame is sustainable development, Holder (n 5) at 165–7.

49. I refer the reader to available literature, such as Long (n 42) and De Lucia (n 42).

50. See in particular R Grumbine, 'What is Ecosystem Management?' (1994) 8(1) Conservation Biology 27.

51. See eg Cullinan (n 13).

52. To be sure, the ecosystem approach is situated in the midst of complex genealogies and competing narratives, as I argue in De Lucia (n 42). However, what is relevant here is to present the prevalent view.

53. Philippopoulos-Mihalopoulos (n 24); A Grear, 'Law's Entities: Complexity, Plasticity and Justice' (2013) 4(1) Jurisprudence, 76; Grear (n 20); A Philippopoulos-Mihalopoulos, 'Epistemologies of Doubt' in Grear and Kotzé (n 12).

elaborating on it, I will problematize both concepts along the following main lines: (1) their binary linear narrative constructs an unrealistically neat demarcation between 'good' and 'bad'; (2) both conceal more than they reveal; and (3) both represent instances of the modern epistemology of the centre.

The first problem that analysing environmental law through this binary produces is that it lacks critical purchase, even though it simplifies an analytically complex situation, and hence makes this complexity intelligible and tractable. The binary in fact situates environmental law along a polarity that is unrealistically *linear* and *dichotomous*.[54] Imagining environmental law along a linear path progressing from darkness to enlightenment, from 'traditional' anthropocentrism to 'modern' ecocentrism[55] whereby the two concepts stand in a relation of 'paradigmatic dichotomy',[56] fails to capture – and this is my central argument – the highly complex, non-linear, and irreducibly genealogical field of discourse and practice that environmental law is.[57]

Secondly, both concepts in the binary conceal as much as – or indeed more – than they reveal. Anthropocentrism, while purportedly referring to an undifferentiated global humanity, operates as an exclusionary mechanism. Anthropocentric law, in its imbrication with capitalism,[58] traverses humanity and selects only *certain* human beings as the beneficiaries of current regimes of ecological accumulation.[59] As some critical (legal and non-legal) scholarship[60] has begun to emphasize, anthropocentrism, with its undifferentiated reference to humanity or mankind, masks the very differentiated realities within which human individuals and communities live. Indeed, as Anna Grear explains cogently and at length,[61] the *Anthropos* set up as the universal representation of humanity is 'far removed from [referring to] human beings in any rich and inclusive sense',[62] and is rather a placeholder for a very narrow instantiation of 'the human being'. Anthropocentrism, on this view, refers to a particular subset of humanity that historically has colonized, exploited and plundered both other human communities and the non-human world, reflecting what Grear calls

54. To be sure, there are gradients and overlaps between anthropocentric and ecocentric positions, at least at the point of transition between the two, as indeed recognized by the literature, see eg Taylor (n 14) and De Lucia (n 42). However, the polarization remains conceptually neat and delineated, as expressed clearly by Bosselmann, who characterized the relation between the two terms as one of 'paradigmatic dichotomy', Bosselmann (n 13) at 92.
55. To reiterate the wording used by Bosselmann (n 13) at 93.
56. Ibid at 92.
57. Within the environmental ethics literature there is no consensus on the role of anthropocentrism, and on whether or not it is either possible or desirable to move from an anthropocentric ethic to an ecocentric one. See, for a summary of these debates, Tallacchini (n 15) and Curry (n 20). For the genealogical complexities of environmental law, and particularly of the ecosystem approach, see De Lucia (n 42).
58. This imbrication is a central feature of modern law; see eg de Sousa Santos (n 9).
59. For an argument about environmental regimes as regimes of ecological accumulation, particularly in relation to climate change, see M Paterson, 'Legitimation and Accumulation in Climate Change Governance' (2010) 15(3) New Political Economy 345.
60. See eg Grear (n 20) and Grear (n 53); De Lucia (n 42); A Malm and A Hornborg, 'The Geology of Mankind? A Critique of the Anthropocene Narrative' (2014) 1(1) The Anthropocene Review 62.
61. Grear (n 20).
62. Grear (n 53) at 82.

'vectors of oppression linking intra- and inter-species hierarchies'.[63] The concept of anthropocentrism conceals, in short, very specific mechanics of exclusion and power relations (operating, crucially in and through law and the rule of law)[64] through which *both* 'other' humans *and* ecosystems are 'systematically disadvantaged'.[65]

Ecocentrism also requires 'particular critical attention',[66] and for at least three reasons. First, ecocentric approaches and articulations rarely problematize the otherwise problematic, unstable and contested concept of 'nature'.[67] Secondly, and relatedly, ecocentrism's legal trajectory remains thickly embedded *within* modernity, at least to the extent that ecocentrism is often associated with the ethical and legal framework of *rights* (eg 'rights of nature'[68] – but of *what* 'nature'?). A rights-based strategy risks locking the framework of legal analysis within a cultural and legal horizon premised on a subject-object grammar and maintains an inevitable linkage with *human* rights and their anthropocentric frame of reference. This is not the place for a thorough critique of the rights-based approach, nor for an evaluation of its merits and advantages.[69] The intent here is merely to *highlight* key problems involved in an uncritical deployment of the narrative frame of ecocentrism. Moreover, it should be noted that both anthropocentrism and ecocentrism each contain a reference to a multiplicity of positions. 'Anthropocentrism' may indicate wildly different ethical approaches to nature simultaneously, such as resourcism,[70] weak anthropocentrism,[71] or stewardship.[72] Not all of these are equally susceptible to the deconstruction of the

63. Ibid at 234. As Andreas Kotsakis suggests, moreover, 'repression of intra/infra-generational equity (and indeed social/ecological justice) in favour of the more 'abstract' and malleable intergenerational equity is also [arguably] a reflection of this rationality', personal communication.
64. See on this especially U Mattei and L Nader, *Plunder*: *When the Rule of Law is Illegal* (Wiley-Blackwell, Malden, MA 1998).
65. Grear (n 53) at 78.
66. Ibid at 82.
67. Earth Jurisprudence is a case in point. For reasons of space, I will have to refer to A Schillmoller and A Pelizzon, 'Mapping the Terrain of Earth Jurisprudence: Landscape, Thresholds and Horizons' (2013) 3(1) Environmental and Earth Law Journal 1.
68. This is for example the prevailing legal strategy employed by scholars affiliated with the emerging legal philosophy called Earth Jurisprudence, see De Lucia (n 10) and Schillmoller and Pelizzon (n 67).
69. For one such assessment, see De Lucia (n 10).
70. Particularly within the context of modern capitalism, resourcism can be also described as 'a kind of modern religion which casts all of creation into categories of utility to humans, whereby there is literally nothing in the natural (and human) world which cannot be "transformed into a resource"' Neil Evernden as quoted in Curry (n 19) at 338.
71. According to one definition 'Stewardship is the responsible use (including conservation) of natural resources in a way that takes full and balanced account of the interests of society, future generations, and other species, as well as of private needs, and accepts significant answerability to society', R Worrell and MC Appleby, 'Stewardship of Natural Resources: Definition, Ethical and Practical Aspects' (1999) 12(3) Journal of Agricultural & Environmental Ethics 263, at 263. This is clearly a concept far removed from resourcism.
72. A weak anthropocentric position was articulated by environmental philosopher Bryan Norton in order to rescue anthropocentrism as a valuable ethical framework for environmentalism, one that can be efficacious and more easily defended than ecocentrism, B Norton, 'Environmental Ethics and Weak Anthropocentrism' (1984) 6(2) Environmental Ethics 131, reprinted in D Clowney and P Mosto (eds), *Earthcare: An Anthology in Environmental Ethics* (Rowman & Littlefield, Lanham 2009) at 161 and 159, respectively.

term *Anthropos* presented above. 'Ecocentrism', similarly, may refer to a series of radically differing approaches that span from deep ecological perspectives to liberal environmentalism, and is arguably an 'alchemic' semantic container for a number of articulations of the relation between ecology as a science and ecology as an ethical framework.[73]

Finally, ecocentrism, together with anthropocentrism, upholds the modern obsession with the centre. While this centrism is relatively clear in the case of anthropocentrism, the fact that ecocentrism is also affected by it is less evident. Yet ecocentrism reproduces the same epistemology of the centre, as Philippopoulos-Mihalopoulos insightfully points out.[74] As such, ecocentrism runs the risk of filling the role of an opposite yet analytically dependent complement to anthropocentrism – of which it remains a specular, and inevitably subjugated, refraction.[75] Ecocentrism thus remains trapped within a mechanics of reversal that ultimately fails to *challenge* (and may indeed reinforce) the paradigm of modernity (with its '-centrisms' and, conversely, peripheries).[76] It is in this sense that Philippopoulos-Mihalopoulos speaks of a 'tyranny of the centre'[77] affecting both ecocentrism and anthropocentrism, and leading to epistemological 'delusions', in the form of the construction of a '*centre*' from which to know.[78] The epistemology of the centre, furthermore, ensures that there is no available alternative: '[h]owever much we battle between extremes, we have no choice but to remain faithful to the soothing idea that there must be a centre'.[79]

It should also be noted, however, that both anthropocentrism and ecocentrism, and the conceptual framework they form together, maintain a certain residual utility, especially in relation to their ability to capture synthetically the polarities of mainstream environmental legal discourse, and more specifically, the competing narratives explicitly discussed in the environmental legal literature. Hence, here my aim has been to problematize the two terms, and rather than entirely discarding them, I wanted to reveal their limited critical purchase. In the next section, I will discuss genealogy and biopolitics, which, I will argue, offer much greater critical purchase and can help articulate a methodologically and theoretically rich critical environmental law.

73. See deLaplante (n 30).
74. Eg A Philippopoulos-Mihalopoulos (ed), *Law and Ecology: New Environmental Foundations* (Routledge, London 2011) and Philippoulos-Mihalopoulos (n 24).
75. In this respect, reflecting that modern oppositional thinking amply deconstructed by Derrida, and by Nietzsche before him, see eg A Schrift, *Nietzsche's French Legacy: A Genealogy of Poststructuralism* (Routledge, London 1995) esp. at 15ff. Oppositional thinking establishes hierarchies and thresholds that aim at erasing the ambiguities that, however, irreducibly inhabit both terms of the binary, and inevitably privileges one term over another.
76. Philippopoulos-Mihalopoulos (n 24). A similar reasoning based on the notion of dichotomization is articulated by Hasley, and in relation to the same logic of reversal, albeit he discusses it in Deleuzian language, see M Hasley, *Deleuze and Environmental Damage: Violence of the Text* (Ashgate, Aldershot 2006) at 35–6.
77. Philippopoulos-Mihalopoulos (n 53) at 29.
78. Ibid at 28.
79. Philippopoulos-Mihalopoulos (n 24) 857. It must be noted, however, that ecocentrism need not be 'nature centred', Taylor (n 14) at 38.

4 AN ANALYTICS OF BIOPOLITICS AND CRITICAL ENVIRONMENTAL LAW

Originally outlined by Thomas Lemke, the methodological approach called 'analytics of biopolitics'[80] combines the concept of biopolitics and the method of genealogy. An analytics of biopolitics, I argue, allows critical environmental legal analysis to *open* instead of producing closures.[81] The deployment of this methodological perspective locates the present argument in the critical space that has tentatively been called 'critical environmental law'.[82]

The goal of an analytics of biopolitics is not to offer 'an ultimate and objective representation of reality',[83] but is to problematize and situate the object of critical analysis within its larger genealogical context. Rather than offering a clear-cut matrix that can be rendered operative through decision-making, an analytics of biopolitics seeks to open up the complexity of a particular discourse and to emphasize the politics of epistemology, the relations of power, and the socio-political *situation* so as to exceed, as Lemke suggests, the policy-oriented question of 'what is to be done?'.[84] The crucial goal of an analytics of biopolitics is thus to 'generate problems', to 'ask questions that have not yet been asked', in order to 'destabilize' what appears to be natural or self-evident.[85] A critical environmental law, I suggest, should similarly aim to outline the slippages that intervene at the margins of the intersection between law and ecology.

Yet (and this is the key advantage of using the analytics of biopolitics rather than the standard framework of critique of environmental law premised on the anthropocentric-ecocentric binary), a biopolitical reading of environmental law allows us to read it negatively and positively *simultaneously*: life – situated at the 'moving margins' of intersection and tension between biology and history,[86] ecology and law – is both enhanced and subjugated by power in the same gesture.[87] The rest of this section will offer a brief exploration of the key concepts of this methodological perspective.

4.1 Biopolitics

In the Foucauldian framework from which most discussions of biopolitics start, biopolitics represents one of two modes of operation of a new mode of power that seizes life under its political purview: biopower. Biopower envelops under its matrices and mechanics of control both individual bodies (through disciplinary techniques, or anathomopolitics) and populations (through techniques of regularization, or biopolitics),

80. Lemke (n 17) at 177ff.
81. Opening, rather than producing closures, is an explicit goal of the theoretical framework called critical environmental law, see A Philippopoulos-Mihalopoulos, 'Looking for the Space Between Law and Ecology' in Philippopoulos-Mihalopoulos (n 74).
82. Philippopoulos-Mihalopoulos (n 74), but see all contributions in the collection, and in particular Philippopoulos-Mihalopoulos (n 81) and B Lange, 'Foucauldian-inspired Discourse Analysis: A Contribution to Critical Environmental Scholarship?' in Philippoupolos-Mihalopoulos (n 74).
83. Lemke (n 17) at 122.
84. Ibid at 123.
85. Ibid at 123.
86. R Esposito, *Bíos: Biopolitics and Philosophy* (University of Minnesota Press, Minneapolis 2008) at 31.
87. Ibid at 37.

and is arguably the most advanced articulation of power today.[88] Indeed, biopower may represent, particularly in its biopolitical articulation, the very horizon of sense within which the entire tradition of modernity can be organized.[89]

If biopower, in its anathomopolitical articulation, aims at governing and disciplining the body, the specific goal of biopolitics is that of governing life's broad processes. Unable to control individual life, its sicknesses and the modalities and timing of individual deaths, biopolitics focuses on controlling the dynamics and statistical properties of populations:[90] 'propagation, births and mortality, the level of health, life expectancy and longevity, with all the conditions that can cause these to vary'.[91] Life – and this is the goal of biopolitics – can be regularized; its processes predicted and optimized. With particular respect to the environment, of central relevance is the fact that through biopolitics 'nature' is no longer simply an object of exploitation,[92] but becomes subjected to a series of positive interventions that aim at its care, at fostering and optimizing its processes, and *at the same time*, at the enhancement of its productive forces.[93] Biopolitics is comprised in this respect of a set of 'regulatory mechanisms'[94] or 'controls'[95] aiming to establish 'an equilibrium, maintain an average, establish a sort of homeostasis, and compensate for variations within this general population and its aleatory field'.[96] The ultimate goal of biopolitics is in this respect to achieve the 'calculated management of life'.[97] What is of most interest in the context of this article however, is the *ecological* declension of biopolitics.

4.2 An ecological declension of biopolitics

Expanding the concept of biopolitics to encompass the natural environment entails combining two analytically distinct, but materially inextricable and complementary, perspectives. The first perspective, which clearly overlaps with anthropocentrism, entails the care for the human population operationalized through the inclusion within the purview of the practices of regularization enacted through biopolitical *dispositif* (ie, of all those apparatuses, institutions and mechanisms of government) of all those environmental processes that affect the well-being and productivity of human populations. Foucault considered these environmental factors to be one aspect of the biopolitical optimization of populations – and as such always already within

88. Thus eg M Hardt and A Negri, *Empire: The New World Order* (Harvard University Press, Cambridge, MA 2000).
89. Esposito (n 86).
90. M Foucault, *Society Must be Defended: Lectures at the Collège de France 1975–1976* (Penguin Books, London 2004) at 246.
91. M Foucault, *The History of Sexuality. Volume I: An Introduction* (Pantheon Books, New York 1978) at 139.
92. Here there is a crucial slippage with respect to the notion of anthropocentrism, albeit there is still an overlap with notions of stewardship. Indeed pastoral care, in Foucault's reconstruction, was a crucial precursor of biopolitics, see M Foucault, *Security, Territory, Population: Lectures at the Collège de France, 1977–1978* (Palgrave Macmillan, New York and Basingstoke 2007).
93. Lemke (n 17) at 68. See also more generally Hardt and Negri (n 88).
94. Foucault (n 90) at 246.
95. Foucault (n 91) at 139.
96. Foucault (90) at 246.
97. Foucault (n 91) at 140.

the scope of biopower. 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'.[98]

The second perspective (which is the one most immediately relevant for this paper and also closer to the ecocentric perspective), focuses more directly on natural entities and populations and on the direct regularization of *their* life. While still ultimately linked to the well-being of human populations, the link may at times appear very tenuous, particularly in the context of some 'ecocentric' approaches to environmental protection and management. However, read through the lens of biopolitics, even the ecological re-calibration of law and politics (ie ecocentrism) can be seen as being ambivalent – to be operating not only in terms of its dominant self-presentation as a critique of the prevalent, increasingly instrumental control of the natural world, but as a new set of normalizing strategies *extending* the scope of biopolitical technologies of power from human populations to the entire natural world.[99]

Furthermore, and in line with Foucault's insight of the co-implicated relation between power and forms of knowledge,[100] the expansion of biopolitical regimes to the natural environment is historically contingent on the development of a number of scientific disciplines such as biology and ecology, as well as on a number of technologies and techniques that allow the monitoring of ecosystem processes. This monitoring is what Foucault called the panopticist gaze of biopolitics.[101] Ecology in particular plays a crucial part, given its double and ambiguous epistemic role,[102] and its moral ambivalence.[103] Ecology's conceptual framework, in fact, is easily mobilized in defence of highly incompatible projects,[104] and, as I have elsewhere argued,[105] can be fruitfully approached genealogically.[106]

The ambivalence or ambiguity of ecology hinges on the fact that, while ecology has helped to problematize the Cartesian separation between the 'social' and the 'natural' worlds – 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'.[107] These new forms of intervention, Rutherford observes, combine to 'constitute a form of ecological

98. P Rutherford, 'The Entry of Life into History', in E Darier (ed), *Discourses of the Environment* (Blackwell Publishers, London 1999) at 45.
99. E Darier, 'Foucault and the Environment: An Introduction' in Darier (n 98) at 23.
100. See eg M Foucault, *Discipline and Punish: The Birth of the Prison* (2nd edition, Vintage Books, London 1995) esp. at 27–8.
101. From Bentham's idea of the Panopticon, a building design that enabled the surveillance of all inmates of a particular intuition by one man, without the inmates being able to know when they are being watched.
102. D Worster, *Nature's Economy: The Roots of Ecology* (2nd edition, Cambridge University Press, Cambridge 1994); Darier (n 99).
103. Worster (n 102).
104. A Bell, 'Non Human Nature and the Ecosystem Approach: The Limits of Anthropocentrism in Great Lakes Management' (2004) 20(3) Alternatives Journal 20; De Lucia (n 42).
105. De Lucia (n 42).
106. M Foucault, 'Nietzsche, Genealogy, History', in DF Bouchard (ed), *Language, Counter-Memory, Practice: Selected Essays and Interviews* (Cornell University Press, Ithaca, NY 1977) at 146.
107. P Rutherford, *The Problem of Nature in Contemporary Social Theory* (PhD Thesis, The Australian National University, 2000) at 4.

governmentality',[108] or as others suggest, an 'ecopolitics'[109] or an 'ecopower'.[110] Ecology then, as a 'framework of ambiguity',[111] constantly operates along a genealogical fault line that can equally underpin – both from a scientific and from an ethical point of view – anthropocentric and ecocentric perspectives.

A central element of this biopolitical articulation of ecology is linked to the way ecology expands and develops what Foucault called the regulatory role of biopolitics in relation to populations. Rutherford highlights the continuous and inevitable slippages that transform and re-transform ecology from a 'holistic' and 'organicistic' discourse into a 'bioeconomic' (biopolitical) *dispositif* that provides 'the analytic tools needed to "intensively farm" the Earth's resources'.[112] Ecology, operating as a regulatory science, enacts a panoptic mode of surveillance that subsumes life/nature under a comprehensive 'modality of intervention'.[113]

This biopolitical regulation, crucially, is enabled, enacted and legitimated through environmental law. In fact, environmental law institutionalizes (ecological) knowledge in particular politico-juridical regimes, thus enabling the biopolitical interventions necessary to optimize life and to enhance its productivity, and, through the authoritative discourse of law, to legitimize such interventions. If ecology, as Rutherford argues, can be understood as the 'rationale behind a new, and increasingly influential, form of political economy',[114] then environmental law has a key facilitative role, since it provides the legal framework necessary to enact the biopolitical government of life. And it is precisely the slippages that intervene at the margins of intersection between law and ecology that biopolitics helps to capture, as the next section will try to show.

5 A BIOPOLITICAL READING OF INTERNATIONAL ENVIRONMENTAL LAW

At this point, after presenting biopolitics and its broader articulation with respect to the entire 'vulnerable living order', to borrow Grear's words,[115] it is time to offer a biopolitical reading of international environmental law. I will use the context of the Convention on Biological Diversity (CBD), and the concept of biodiversity in particular, as an example, for several reasons. First, biodiversity has become a crucial concept of international environmental law. Secondly, and relatedly, biodiversity has become a shorthand for 'nature', to the extent that the legal concept of biodiversity encompasses all living beings (species), their genetic pool and their physical environments (ecosystems). Thirdly, biodiversity – as a concept and as a legal regime – lies at a crucial juncture where science and power intersect and sustain one another,

108. Ibid at 4.
109. Darier (n 99) at 23.
110. P Lascoumes, *L'éco-pouvoir. Environnements et Politiques* (La Découverte, Paris 1994).
111. De Lucia (n 42).
112. Rutherford (n 98) at 53. See also D Worster, 'The Vulnerable Earth: Towards a Planetary History' (1987) 11(2) Environmental Review 87, and Worster (n 102), on which Rutherford draws.
113. Rutherford (n 107) at 140.
114. Ibid at 134.
115. Grear (n 5); the expression is part of the very title of the article.

enacting what, in Foucauldian terms, might be called an ecological regime of truth.[116] Finally, it is arguably within the context of biodiversity protection that the ecocentric perspective has found its most advanced articulation.[117] Indeed, it is precisely in relation to the CBD that Emmenegger and Tschentscher have argued that there is an ongoing progression from anthropocentrism to ecocentrism.[118] In this respect, the preamble of the CBD famously mentions the intrinsic value of nature as the first ground for protecting biodiversity.[119] Moreover, the ecosystem approach – hailed, as it is, as a crucial paradigm shift – is a key strategy in the context of the CBD. Yet, I maintain that the biodiversity regime is located precisely at that conceptual and normative juncture where anthropocentrism and ecocentrism intersect through biopolitics, and are bound together in a biopolitical entanglement.

The first important point I wish to highlight is that the very concept of biodiversity, enshrined in the CBD, is located at the intersection between knowledge, life and power. The concept of biodiversity emerges from a branch of biology that Kotsakis has described as an 'activist and tactical school of thought'.[120] Claiming this activist role[121] opened space for what has been called 'normative science'[122] or 'scientific activism'.[123] The concept of biodiversity was invented 'as an organizing concept' to function as 'a communicative tool in the broader political arena'.[124] This intersection between knowledge, life and power (or politics) is concretized on the one hand through a series of prescriptions and interventions aimed at 'the defense of life',[125] and on the other, through the authoritative *dispositif* of law, and especially international environmental law (which is increasingly traversed normatively by the concept of biodiversity), and the CBD in particular. The concept of biodiversity is thus easily susceptible to a biopolitical reading.[126]

Moreover, biodiversity contains biopolitical panopticism at its roots, as is evident in some of the key tactics and methods of conservation biology. For example, the global biodiversity census proposed by famous conservation biologist Edward Wilson, is a tactic that can be understood biopolitically as a form of 'panopticism'. Through its processes of 'identification, collection of specimens, and subsequent research', the global biodiversity census aims at 'neatly packaging' nonhuman nature into a set

116. As we have seen in the previous section, Rutherford likens the effects of regulatory science to a panopticism subsuming life/nature under a comprehensive 'modality of intervention', Rutherford (n 107) at 140.
117. Emmenegger and Tschentscher (n 31).
118. Ibid at 547–8.
119. CBD, preamble, recital 1.
120. A Kotsakis, *The Biological Diversity Complex: A History of Environmental Government* (PhD Thesis, London School of Economics, 2011) at 55.
121. M Soule and B Wilcox (eds), *Conservation Biology: An Evolutionary-Ecological Perspective* (Sinauer, Sunderland, MA 1980), see especially the foreword.
122. R Lackey, 'Appropriate Use of Ecosystem Health and Normative Science in Ecological Policy', in D Rapport et al. (eds), *Managing for Healthy Ecosystems* (CRC Press, Boca Raton, FL 2002).
123. D Erasga, 'Biopolitics: Biodiversity as Discourse of Claims', in D Ersaga (ed), *Sociological Landscape – Theories, Realities and Trends* (Intech, Rijeka 2012) at 4. See also A Vadrot, *The Politics of Knowledge and International Biodiversity* (Routledge, London 2014).
124. Erasga ibid at 4.
125. Ibid at 257.
126. C Biermann and B Mansfield, 'Biodiversity, Purity, and Death: Conservation Biology as Biopolitics' (2014) 32(2) Environment and Planning D: Society and Space 252.

of designations, which, in turn, facilitate 'conservation *and* commodification' simultaneously.[127]

This panopticist programme of biopolitical surveillance is operationalized through the intersection of knowledge and power, of science and law, whose collaborative effort gives rise and shape to an ecological regime of truth enacted precisely through such intense and comprehensive monitoring programmes – including the International Biological Program,[128] the Global Census of Marine Life[129] and the Global Taxonomy Initiative (GTI).[130] Youatt argues in this respect that from the biopolitical perspective embodied in such tactics and practices, 'nonhumans are [ultimately] 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'.[131]

This biopolitical project of panopticist surveillance traverses the entire field of international environmental law. The 1987 Report of the World Commission on Environment and Development, in fact, at paragraph 56, already envisioned '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'.[132] Indeed, the discourse of ecosystem (or ecological) health has become central (despite its ambiguities)[133] in the context of environmental law (along with the intertwined discourse of ecological integrity – indeed the two are considered by some as 'inseparable').[134] In its ecological declension, biopolitics is thus extended 'to all life-forms'[135] as a 'normalizing strategy' attempting 'to extend control ("management") to the entire planet'.[136] Yet one question that is raised, and which shows how the complexities of environmental (legal) discourse exceed the centric binary, is whether it would be possible to protect and preserve the vulnerable living world *without* such global census programs and where the demarcation line lies between the conservation and the commodification of biodiversity.

A second, crucial biopolitical effect of biodiversity relates to the concept of alien and invasive species. Biermann and Mansfield discuss in this respect the 'racialization'

127. R Youatt, 'Counting Species: Biopower and the Global Biodiversity Census' (2008) 17(3) Environmental Values 393.
128. Aimed at 'understanding the biological basis of productivity and human welfare', Rutherford (n 107) at 135.
129. 'A 10-year international effort undertaken in order 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' <http://www.coml.org/about-census>.
130. Aimed at removing the so-called 'taxonomic impediment', that is, the lack of taxonomic knowledge, allegedly a key to the conservation of biological diversity, <https://www.cbd.int/gti/default.shtml>.
131. Youatt (n 127) at 394.
132. World Commission of Environmental and Development, Our Common Future: Report of the World Commission on Environment and Development (A/42/427), 4 August 1987 (hereinafter WCED), para 56.
133. Lackey (n 122); De Lucia (n 42).
134. R Siron et al., 'Ecosystem-Based Management in the Arctic Ocean: A Multi-Level Spatial Approach' (2008) 61 Arctic 86, at 87, citing D Rapport et al. (eds), *Ecosystem Health* (Blackwell Science Inc., London 2008).
135. Rutherford (1993) quoted in Darier (n 99) at 23.
136. Sachs (1993) quoted in Darier (n 99) at 23.

effects that conservation biology and international environmental law enact together in the field of biodiversity. This racialization descends from the fact that the 'biopolitical rule must not only arbitrate the classification of life into species and populations [which we have seen just above], but also decide "whom to correct and whom to punish … who shall live and who shall die, what life-forms will be promoted and which will be terminated"'.[137] This is what Foucault calls 'racism'[138] (which in biopolitical terms is aimed at securing a population through immunization against external, racial, threats),[139] and shows biopolitics to be fully intertwined with disciplinary and sovereign forms of power and intervention in a seamless matrix of control. Within the context of the CBD, this racialization is operative in the provisions regulating alien species (and also in the emerging discourse of ecosystem services and disservices).[140] Article 8(h) obliges Parties to prevent the introduction of alien species and to '*control or eradicate*' those alien species 'which threaten ecosystems, habitats or species'.[141] Ultimately, the concept of alien and invasive species effectively articulates the biopolitical aporia noted above: in *the same gesture* life is protected *and* destroyed, fostered *and* killed.[142] In other words, the positive care for life and its thanatological negative are constantly, inevitably and constitutively co-implicated.

Even the most comprehensive articulation of the ecological (and ecocentric) worldview in law, the ecosystem approach (see above section 2), is largely, if not entirely, caught in this biopolitical aporia, which continuously transforms care for 'the structure, functioning and integrity of ecosystems'[143] into programmes of ecosystem monitoring and surveillance that subjugate and subsume life under biopolitical matrices of regularization and control. Indeed, Principle 5 of the Malawi Principles makes explicit the imperative towards 'ecosystem services' as a core goal of the entire ecosystem approach: 'conservation of ecosystem structure and functioning, in order to maintain ecosystem services, should be a priority target of the ecosystem approach'.[144] The ecological framework informing the ecosystem approach is thus evidently to be put to use in order to ensure, as a priority, the maintenance of ecosystem services,

137. Biermann and Mansfield (n 126) at 261, quoting M Dillon and J Reid, *The Liberal Way of War: Killing to Make Life Live* (Routledge, London 2009).
138. Foucault (n 90) at 254.
139. M Coleman and K Grove, 'Biopolitics, Biopower, and the Return of Sovereignty' (2009) 27(3) Environment and Planning D: Society and Space 489, at 494.
140. See eg R Dunn, 'Global Mapping of Ecosystem Disservices: The Unspoken Reality that Nature Sometimes Kills Us' (2010) 42(5) Biotropica 555.
141. CBD, Article 8(h), emphasis mine.
142. Or rather, *some* life is protected, while *some other* life is destroyed. The concept of biodiversity, in its abstraction, conceals this biopolitical discernment, so that some particular lives may be sacrificed in the name of Life.
143. A key terminological and conceptual focus of most articulation of the ecosystem approach, see eg De Lucia (n 42); F Platjouw, *Environmental Law and the Ecosystem Approach: Maintaining Ecological Integrity through Consistency in Law* (Routledge, London 2016); V De Lucia, *The Ecosystem Approach in International Environmental Law: A Biopolitical Critique* (PhD Thesis, UiT – Arctic University of Norway, 2016).
144. Principle 5, Malawi Principles, in Recommendation V/10 on 'Ecosystem approach: further conceptual elaboration', in the Report of the Fifth Meeting of the Subsidiary Body on Scientific, Technical and Technological Advice Montreal, 31 January–4 February 2000, Canada, UNEP/CBD/COP/5/3, endorsed by the COP of the CBD in Decision V/6, 'February Approach', in the Report of the Fifth Meeting of the Conference of the Parties to the Conference of the Parties to the Convention of Biological Diversity, 15–26 May 2000, Nairobi, UNEP/COP/5/23 (UNEP/CBD/COP/DEC/V/6).

which are the key metric for the measurement of the usefulness of biodiversity. Indeed, the very idea of conservation is arguably increasingly understood to be *ancillary* and *instrumental* to the provision of ecosystem services, while the very concept of the ecosystem approach is underpinned by the idea that '[t]he conservation of biological diversity is necessary to maintain the production of ecosystem goods and services'.[145] Furthermore, this biopolitical entanglement is equally operative beyond the context of the CBD, and is further complicated by its intersection with another set of key biopolitical concepts: ecological health and ecological integrity.[146]

The essence of the ecosystem approach, the OSPAR Commission has suggested, 'is to allow sustainable exploitation of natural resources while maintaining the quality, structure and functioning of marine ecosystems'.[147] Within the context of the EU, the primary task of the ecosystem approach (to fisheries, in this case) is 'ensuring goods and services from living aquatic resources for present and future generations', in such a way that 'benefits … are high while direct and indirect impacts … on marine ecosystems are low'.[148] The International Council for the Exploration of the Sea (ICES), a key player in the construction of the regime of truth where ecology, power and law intersect, defines the ecosystem approach, reproducing an earlier OSPAR definition, as the

> comprehensive integrated management of human activities based on the best available scientific knowledge about the ecosystem and its dynamics, in order to identify and take action on influences which are critical to the *health* of the marine ecosystems, thereby achieving *sustainable use of ecosystem goods and services* and maintenance of ecosystem *integrity*.[149]

The further entanglement of the ecosystem approach with the concept of ecological health and ecological integrity makes visible the core of the biopolitical paradox: ecocentric language (eg ecosystem integrity) and anthropocentric goals (the provision of ecosystem services) converge towards an aporetic dilemma in ways that nonetheless exceed the mere capture of ecocentric language by hegemonic anthropocentric law. Both dimensions are inevitably bound up in a common biopolitical entanglement, and are always already inside the biopolitical aporia precisely because the genuine goal of protecting the health and integrity of the Earth's ecosystems is continuously and inevitably entangled with the effect of subjugating life. Such subjugation is functional for enhancing life's productivity and to enframe it within the global matrices of ecological regimes of accumulation. Yet also, circularly and crucially, such subjugation is also functional for life's protection! Inserting life into matrices of global monitoring and surveillance is a key element in its protection within the context of biopolitics.

145. Expert Meeting on The Ecosystem Approach, *Review of the Principles of the Ecosystem Approach and Suggestions for Refinement: A Framework for Discussion*, Montreal 7–11 July 2003 (UNEP/CBD/EM-EA/1/3, 2003), para 47. The point is reiterated in different ways (and in relation to the three objectives of the CBD) at sub-paras 1, 2 and 3.
146. For reasons of space I cannot discuss the two concepts, so I will have to refer the reader to De Lucia, 2016 (n 143) (and esp. chapter 15) where their biopolitical function is drawn out in detail. For the key role of ecological integrity in particular in International Law see eg Kim and Bosselmann (n 43).
147. OSPAR Commission, Quality Status Report 2010, OSPAR, 2010, at 9.
148. European Commission Communication. The role of the CFP in implementing an ecosystem approach to marine management. COM(2008)187, Brussels 11.04.2008, at 3.
149. ICES, Guidance on the Application of the Ecosystem Approach to Management of Human Activities in the European Marine Environment, ICES Cooperative Research Report 273, 2005, at 4; emphases mine.

6 CONCLUSIONS

Against the theoretical background outlined thus far, the binary pair anthropocentrism/ecocentrism appears unable to capture the conceptual nuances and genealogical complexities that traverse and structure environmental law. Thus, a '-centrist' analytic framework, despite its potential residual utility,[150] arguably loses most of its critical purchase. A biopolitical reading, by contrast, shifts the critical register decisively beyond a dialectical relationship between two conceptual horizons that respond to the same underlying epistemological logic.[151] A biopolitical reading moves beyond linear narratives that imagine a progression from anthropocentrism to ecocentrism as being either a sign of (in descriptive accounts), or a requirement (in normative ones) for, the increasing penetration of ecology (as both a science and as an ethical framework) into law and purportedly signalling the increasing maturity or improved credentials of environmental law. A biopolitical reading aims at making genealogical lacerations visible, at opening up and problematizing, rather than at finding truths, imposing closures or reading history as relentless progress. A biopolitical reading reveals, for example — as I have argued — that the concepts of biodiversity and of the ecosystem approach are caught precisely in the midst of these genealogical lacerations – of the biopolitical aporia – functioning simultaneously as *dispositifs* of protection and control, conservation and subjugation. And, if ecocentrism no longer offers a redeeming horizon for re-orientation of environmental law, caught as it is *inside* biopower and the biopolitical aporia, critique is confronted with a new set of questions.

If, as Hardt and Negri suggest,[152] biopower saturates the entire space of life, and if, as Philippopoulos-Mihalopoulos also suggests (albeit from a different perspective), the world is 'deprived of an outside',[153] what are the consequences for critique? A second question explores the consequences for critique of the aporetic logic of biopolitics, a logic that seemingly prevents any resolution – and perpetually locks biopolitics within its paradox: that life can be protected only by subjugating it. Esposito is the political philosopher who has explored this aporetic logic most comprehensively. With Foucault, Esposito asks '[w]hy does biopolitics', that is, a politics that affirms life, 'continually threaten … to be reversed into thanatopolitics?',[154] that is, a politics of death?[155] What Esposito wants to emphasize, both in the question Foucault left open, and in his own (Esposito's) work, is a constitutive dilemma of biopolitics, a 'never-released tension'[156] that accompanies it, because the two poles of its articulation – life and politics – are engaged in an inevitable and insoluble struggle. This is a consequence

150. Especially in relation to the ability of the two concepts to capture synthetically the polarities of the mainstream discourse, see e.g. De Lucia (n 42). Rather than entirely discarding the two concepts, the aim of this section is to show that they cannot be usefully deployed as the *central* critical framework of analysis, but must be inserted within a biopolitical horizon.
151. Philippopoulos-Mihalopoulos (n 24); A Philippopoulos-Mihalopoulos, 'The Sound of a Breaking String: Critical Environmental Law and Ontological Vulnerability' (2011) 2(1) Journal of Human Rights and the Environment 5.
152. 'There is nothing, no naked life, no external standpoint, that can be posed outside' biopower, suggest Hardt and Negri (n 88) at 32.
153. A Philippopoulos-Mihalopoulos, 'The World Without Outside' (2013) 18(4) Angelaki: Journal of the Theoretical Humanities 165, abstract.
154. Esposito (n 86) at 39.
155. Ibid at 38–9.
156. Ibid at 32.

of the internal contradiction of biopolitics itself:[157] in the same gesture, biopolitics includes and excludes life, creating a 'zone of irreducible indistinction'[158] where the enhancement of life becomes, or always already is, its subjection and subjugation.

This is precisely the biopolitical mechanism that traverses the entire field of environmental law, and finds its most pointed, even paradigmatic example, in the concept of the ecosystem approach.[159] The protection and enhancement of life that environmental law should enable is, from this perspective, always already entangled with its subjugation. In biopolitical regimes, practices of care, of regularization and of exploitation are inextricably co-implicated. Environmental law, accordingly, is susceptible to a biopolitical reading to the extent that it operates as a regulatory mechanism aimed at establishing – to apply the fitting words of Foucault – 'an equilibrium, maintain an average, establish a sort of homeostasis, and compensate for variations within [a general stream of services or biological populations] and its aleatory field'.[160] As a biopolitical tool, environmental law is aimed at the elimination of the *alea*, that 'random element inherent in a population of living beings', with the ultimate goal of optimizing 'a state of life'.[161] This is, in effect, another way to articulate the legal concepts of conservation and sustainable use. Indeed, as this optimization entails maintaining the integrity and health of ecosystems, 'nature' (itself the object of biopolitical management) is at the same time trapped in the zone of indistinction that constantly transforms practices of care into practices of death: the conservation goals enacted through environmental law are always entangled with the systematic and sustainable exploitation of ecosystem services functional to human well-being. And, as already mentioned, in this respect environment law simultaneously facilitates the 'conservation *and* commodification'[162] of 'nature'. This is the biopolitical aporia affecting environmental law.

To conclude then, we must ask, with Esposito, a final question, which may also operate as a minimal research agenda for a critical environmental law in a biopolitical register: is it possible to protect life without hindering it, without subjugating and inserting it within a matrix of control and surveillance, without always re-activating a thanatological return?[163] Is it possible to imagine global environmental protection and biodiversity conservation without the biopolitical programmes of ecosystem monitoring and ecological surveillance, programmes in which anthropocentrism and ecocentrism are entangled and which simultaneously enable conservation and commodification, the maintenance of ecological integrity and the enframing of 'nature' as a 'standing reserve'?[164] Is it possible, in other words, to displace the biopolitical aporia? If biopolitics engulfs even ecocentric articulations of law, how is it

157. G Agamben, *Homo Sacer: Sovereign Power and Bare Life* (Stanford University Press, Stanford, CA 1998); Esposito (n 86).
158. Agamben (n 157) at 12.
159. See eg De Lucia (n 42).
160. Foucault (n 90) at 246.
161. Ibid at 246.
162. Youatt (n 127).
163. The circular production and re-production of the thanatological exclusion that always emerge as the seemingly inevitable result of biopolitics rest, as we have seen, on the intimate relation between modernity, biopower – and its specifically biopolitical declension – and capitalism.
164. For an elaboration of the link between the Heideggerian expression 'standing reserve' and biopolitics, see C Wolfe, *Before the Law: Humans and Other Animals in a Biopolitical Frame* (University of Chicago Press, Chicago, IL 2013) at 4.

possible to think law beyond law – that is, to read and theorize law outside of the aporetic mechanisms of biopolitics? And if that is possible, through which legal construct, principle, theory? Is legal theory at all useful as a critical practice?

These questions linger. Yet if we understand power as a historically given 'complex strategical situation',[165] as Foucault suggests,[166] there arguably remains the possibility of a space, however minimal, that exceeds the hegemonic grip of biopolitical closure and exceeds even the biopolitical aporia. This is the tentative space where it might become possible to explore the productive potential of environmental law – or, better, the productive potential that opens up at the empty juncture of its multiple articulations.[167] This, then, is the task of the critical environmental legal scholar.

165. Foucault (n 91) at 93.
166. Ibid.
167. For an example of the multiple articulations of environmental law, at various levels of legal articulation, see Fisher (n 18); De Lucia (n 42) and more at length De Lucia (n 143) and L Kotzé, 'Fragmentation Revisited in the Context of Global Environmental Law and Governance' (2014) 131(3) South African Law Journal 548.