Regulating Nature in Law Following Weak Anthropocentrism: Lessons for Intellectual Property Regimes and Environmental Ethics

Rosa Maria Ballardini and Corinna Casi***

Abstract: *Reversing the ecological degradation that is rapidly spreading globally requires radical action at various levels of society. In this transition, the legal framework could create pathways for ethically sound, yet effective, techno-socio-economic developments. Most legal systems are failing, as they are built on 'strong' anthropocentrism, where humans' interests are prioritized over those of nature. This approach is particularly prominent in some fields of private law, such as intellectual property regimes. This article focuses on the alternative, namely to create a 'rights of nature' (RoN) framework in order to curb and, ideally, reverse the continuing environmental decline. In this regard, we argue that to better respect nature, law should follow 'weak' anthropocentrism, identified in this paper as an approach that assigns higher intrinsic value to humans but also recognizes intrinsic value in non-human nature. To this end, an inclusive concept of 'nature' that encompasses both humans and non-human elements of nature, and where non-human elements of nature also become legal subjects with a degree of legal capacity, could provide a viable alternative. We concretize this vision via elaborating on how such an approach could divert, in particular, traditionally 'strong' anthropocentric regimes such as (intellectual) private property law towards achieving more eco-friendly outcomes.*

Key words: *private law, intellectual property law, anthropocentrism, rights, nature, environmental ethics*

1. Introduction

Ecological degradation, ranging from loss of species to climate change, is rapidly spreading globally at a systemic level.[1] Scenarios like those depicted by the so-called 'Anthropocene' – a new epoch marred by disruptive human action on nature and its processes[2] – convincingly point to the need for change in the relationship between humans and nature. Executive Director Andersen of the United Nations Environment Programme claims that with the coronavirus

* Rosa Maria Ballardini, Associate Professor and Vice Dean (research), University of Lapland, <rosa.ballardini@ulapland.fi>.

** Corinna Casi, Doctoral candidate and ValueBioMat Researcher, University of Helsinki and University of Lapland, <corinna.casi@ulapland.fi>.

1. See IPBES (2019): Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. E. S. Brondizio, J. Settele, S. Díaz, and H. T. Ngo (editors). IPBES secretariat, Bonn, Germany.
2. Crutzen & Stoermer 2000.

(COVID-19) outbreak in 2019–2020, nature is sending us a message. Humans have put too much pressure on the natural environment. As Andrew Cunningham notes, after the experience of the COVID-19 pandemic, we "cannot" (and should not) "go back to business as usual".[3]

On the one hand, the legal framework could play a crucial role for fostering a transition towards ethically sound, yet effective, techno-socio-economic developments. On the other, however, a major deficiency lies in the fact that most legal regimes are built following 'strong' anthropocentric ways of thinking, where humans' interests are prioritized, while the interests of nature are either not considered at all, or at best are subordinated. For these reasons, there is a growing interest in developing frameworks for granting legal status or even rights to non-human parts of nature.[4] One justification for this move is that while recent decades have seen the adoption of a growing number of environmental treaties, laws and regulations, existing models of protection for non-human natural elements are failing, as they do not fully reflect the shift needed to curb and, ideally, reverse the continued environmental decline. This is primarily a consequence of the 'strong' anthropocentric view in law.

Even though 'strong' anthropocentrism is a typical characteristic of the legal system as a whole, 'strong' anthropocentric types of practices are particularly evident in private law regimes, such as intellectual property rights (IPR).[5] Amongst the many critiques, there is currently a rising concern that our (Western) types of private property (including intellectual property) regimes have failed to foster meaningful development of societies with special focus on protecting our planet because they have relied too heavily on economic efficiency.[6] Indeed, progress cannot be defined merely by profit and the prosperity it produces. To save the planet, values such as care and respect for the environment as well as acknowledgement of the intrinsic moral value of non-human nature should be not only taken into consideration but also valued by legislators and businesses at least as much as profit.

Among the various proposed changes, here we focus on the alternative of creating a 'rights of nature' (RoN) framework.[7] We conceptualise RoN based on a 'weak anthropocentric' perspective, identified as an approach that assigns higher intrinsic value to humans but also recognizes intrinsic value in non-human nature. As such, we understand RoN as a key enabler for transition to a society that respects and values more non-human natural entities. For this reason, even though several concepts of 'nature' exist, in this paper we broadly define nature as 'the whole web of life on earth'.[8]

In this paper we ask whether and how establishing a RoN concept based on 'weak anthropocentrism' could enable departing from the currently mainstream incentive- and economic efficiency-based (and consequently 'strong anthropocentric') private law framework into one that pays greater heed to the interests of nature. To carry out our analysis we use examples mainly from private property regimes such as IPR, where 'strong' anthropocentrism has thus far been particularly prominent.

The paper begins by shedding light on how the 'orthodox' distinction in most Western legal systems between legal subjects and objects is de-

3. Carrington 2020.
4. Knauss 2018.
5. Ballardini, Kaisto and Similä 2020.
6. Harari 2019; Pihlajarinne & Ballardini 2020. Moreover, as Piketty points out, 'human-centred' in private property regimes has meant 'not for all humans', as private property has led to extreme inequality throughout the world, especially when combined with what he calls hypercapitalism (Piketty 2020).
7. See Boyd 2017; Naffine 2012.
8. See Gills & Morgan 2019.

cidedly based on anthropocentric premises and, as such, is not conducive to enabling non-human natural elements to be legal subjects (section 2). We contextualize this general discourse by focusing on the legal framework of (European) private property regimes such as intellectual property (IP) rights. The reason for this choice is primarily because, even though the whole Western legal system is built on strong anthropocentrism, this becomes particularly evident when looking at regimes such as private property (section 3). To enable a change, we ask whether a move such as creating RoN based on weak anthropocentrism could help to better strike a balance between exclusive (humans') rights to private property, relevant fundamental (human) rights and respect for non-human nature. We answer this key question first by presenting the notion of RoN within the philosophical field of environmental ethics (section 4). This analysis sheds light on the main discussions on strong and weak anthropocentrism, as well as non-anthropocentric theories, that have thus far characterized the discourse on RoN in the philosophical field. Second, we address the question by presenting and critically analysing three major examples where RoN have actually already been developed in the law: the example of including RoN in the constitution, as in Ecuador, the example of creating RoN through *ad hoc* pieces of legislation, as in the case of the Whanganui River in New Zealand, and the example of developing RoN through judicial interpretations, as in the case of the Ganges and Yamuna rivers in India (section 5). These cases are important especially because they elucidate a main shortcoming in all these RoN attempts: although the initial moral and legal attempt has been to create RoN based on non-anthropocentric principles, their actual implementation is ultimately rather anthropocentric. We argue that one of the main reasons for this failure to actually move away from anthropocentrism relates to the fact that most legal systems (as well as most scholars) have thus far conceptualized and implemented RoN as a set of fundamental rights for non-human elements of nature only (section 6). In other words, RoN have been intentionally kept distinct from (and allegedly even subordinated to) fundamental rights belonging to humans. This as such is an anthropocentric way of approaching the matter. Admitting the limitations of promoting non-anthropocentric approaches in law (albeit not denying their potential importance), we hereby suggest that for the current conceptualisation of the law to be able to better respect nature, a 'weak' anthropocentric approach should be followed while developing RoN. In this paper, we outline 'weak anthropocentrism' as the approach that assigns higher intrinsic value to humans, but recognizes intrinsic value in non-human nature as well. For this to occur, an inclusive concept of 'nature' that encompasses both humans and non-human elements of nature and where non-human elements of nature also become legal subjects with a degree of legal capacity, could provide a viable alternative. In the context of regimes such as (intellectual) private property laws, this approach could provide a viable basis for better promoting developments and practices of more sustainable innovations and their uses.

2. Nature and the Legal Framework: Persons and Nonpersons

In order to contextualize the role of non-human elements of nature in law, we begin with a general discussion of legal theory, legal personhood and legal capacity. Law can generally be defined as a body of norms that regulates relationships between legal entities, or between those entities and 'things' (nonpersons) lacking legal capacity. According to Tuori, this divide between persons and nonpersons[9] forms part of the 'deep structure of law' shared by all West-

9. It should be noted that in most Western jurisdictions, animals are treated as nonpersons. See e.g. Kurki 2019.

ern legal systems.[10] Legal personality (or legal personhood) is a prerequisite for legal capacity, which has traditionally been defined as the ability to exercise one's own rights and duties.[11]

The main actors in our legal system are human and non-human persons. In law a human person is called a 'natural person', while a non-human person a 'judicial person'.[12] Natural persons acquire legal personality 'naturally', by 1) being a human being (although this is not always made explicit, it is a general tacit assumption in most jurisdictions), 2) being born (in some jurisdictions, even before that),[13] 3) being currently alive, 4) being sentient, and 5) having sufficient rationality and age.[14] Judicial persons are legal entities – such as associations, limited liability companies, and foundations – other than human beings. Judicial persons are conferred legal personality by some 'unnatural' legal process such as by registration with a governmental agency or primary legislation. They also need to be represented by a natural person in order to operate, highlighting the anthropocentric view in this legal construction, too. The scope of legal capacity depends on a legal person's role and function in society and on the legal system involved. Historically the capacity of natural persons has varied from having no rights – based on sex or race – to full legal capacity. Moreover, even today a difference exists in legal capacity within natural personhood, as in the case of minors and persons under guardianship. Moreover, the legal capacity of judicial legal persons has changed with time and indeed still varies in different legal systems.

Overall, however, the entire legal system as it currently stands is arguably anthropocentric – indeed, strongly so. Additionally, the needs of humans (whether as natural persons, that is, as human beings, or judicial persons which must be represented by a natural person, that are thus able to promote their own interests) are always the driving force in terms of when and how to regulate activities. This undeniably anthropocentric vision in law – meaning that only human beings have intrinsic value whereas non-human natural entities possess only instrumental value and so are used as a commodity for human needs – is supported by the traditional 'orthodox' theory of legal personhood, based on the capacity to hold rights and obligations. As Kurki puts it, the problem with this approach is that: "The Orthodox view has implications that obscure the need for legal reasoning and normative argumentation; one such implication is that animals do not, or cannot, currently hold legal rights because they are not legal persons".[15] The same problem applies in the context of rights for non-human elements of nature in general. At the same time, however, the legal system is flexible since the concept of legal personhood is evolving, rather than static. Therefore, a new concept for legal personhood which might be based, for example, on weak anthropocentrism, is far from unthinkable. Indeed, some legal-philosophical theories have already been presented that might support such a shift. To illustrate: the so-called 'bundle theory' presented by Kurki upholds the view that entities may be legal persons without necessarily being subject to rights or exercising any duties.[16] This theory proposes that legal personhood comprises a cluster of rights and/or

10. Tuori 2002.
11. Kurki 2019.
12. Judicial persons are also called legal, juridical, juristic, artificial, or fictitious. To avoid confusion, here we only refer to judicial persons while we use the expression 'legal person' to refer to any entity with legal personhood.
13. MacCormick 2007.
14. While a natural person that meets all 5 criteria is an independent actor who can actively enter into contracts and perform legal acts, a natural person that meets only criteria 1-4 is a legal entity that lacks legal capacity and that, thus, should have legal representatives acting on its behalf. For a comprehensive view see e.g. Pietrzykowski 2016.
15. Kurki 2019, 13.
16. Kurki 2019.

duties depending on the nature and purpose of a particular legal relation[17] and that one can be a legal person for some purposes without being a legal person for all purposes.[18] Kurki argues that there are already instances exemplifying the bundle theory within our existing concept of natural legal personhood. For instance, even though individuals with mental disabilities lack (full) legal capacity, they are nevertheless right holders, as stated in the Convention the Rights of Persons with Disabilities.[19] Indeed, other similar theories are currently being forged, especially in view of developments like artificial intelligence.[20]

Yet, at the same time, all natural elements, other than humans, are considered as non-persons and lack legal capacity. As such they have been treated as objects of property to be protected, but also owned, used, and even destroyed. This type of regulatory setting has often led to the interests of recognized legal entities prevailing over preservation of the natural environment. As noted above, this approach is particularly predominant in legal fields regulating private property, such as property and intellectual property laws, where non-human natural elements have been considered as objects of property owned by natural or judicial persons (i.e. right owners). Next, we will briefly present some concrete examples of how private property regimes such as IPR are currently strongly anthropocentric and often utilitarian, where the emphasis has lain on rather straightforward economic efficiency.[21] This will enable us to discuss the key questions of this article, namely whether there is a need in our legal system to move away from anthropocentrism in order to tackle the environmental problem and why it is desirable to change this setting and enable non-human elements of nature to join the 'special' category of legal subjects.

17. Wise 2010.
18. Kurki 2019.
19. United Nations Convention on the Rights of Persons with Disabilities (adopted 13 December 2006, entered into force 3 May 2008) UNTS 2515 art 12 MLA (Modern Language Assoc.).
20. van den Hoven van Genderen 2018.
21. Fisher 2001; Alexander & Peñalver 2012.

3. Respecting Non-Human Elements of Nature in Private Property Regimes

As previously mentioned, even though strong anthropocentrism is deeply ingrained into the legal system as a whole, the approaches and practices followed in some fields of private law, such as IPR, are particularly prominent. Intellectual property law is a field of law that aims at providing incentives to foster innovative and creative activities by awarding an exclusive, temporary, and limited right to the creator of an artistic work or the inventor of some technical innovation, while also balancing societal interests. By striking the right balance between the interests of innovators and those of the wider public, the IP system aims to build a society in which creativity and innovation can flourish.[22]

It is well known that one of the biggest societal challenges of today is how to transform our economic and innovation structures to more environmentally sustainable ones. Notably, Article 10 of the Paris Agreement on Climate Change emphasizes the importance of innovation by stating that: "Accelerating, encouraging and enabling innovation is critical for an effective, long-term global response to climate change […]".[23] Innovation aspects for sustainable development are also emphasized in the United Nations' 17 sustainable development goals (SDGs) that include aspects such as industry, innovation and infrastructure. In other words, regulation of innovation ecosystems holds significant potential for advancing developments that are more respectful of the planet. Although neither the Paris Agreement

22. See "What is intellectual property", WIPO Publications No. 450 (E).
23. See Paris Agreement, United Nations Treaty Collection, 8 July 2016, Art. 10.5.

nor the UN SDGs mention IPR explicitly, the link to IP clearly transpires from the emphasis placed on innovation.

Many national constitutions mention both protection of private property, for example through IPR, and protection of the environment as fundamental rights, even though a link between the two is generally missing, so that the question how to balance them remains largely open.[24] Notably, Article 11 of the Treaty on the Functioning of the European Union (TFEU) creates an obligation to integrate sustainable development into *all* areas of EU legislation, including IP law.[25] So, arguably, an environmental integration obligation may hold huge potential as a means of steering the interpretation and application of EU legal instruments that – in one way or the other – affect nature.

This notwithstanding, however, policy coherence, as well as a holistic and evidence-based approach for achieving sustainability is still needed in several areas of EU law, especially in property law regimes such as IPR.[26] One of the main critiques refers to the mainstream focus on incentives and economics, as well as on 'strong' ownership rights, as typically followed in most Western legal systems like the European Union.[27] This approach – where economic and human interests always tend to prevail – makes it difficult to use private property regimes such as IPR to pursue the primary goal of respecting nature for what it is. Ballardini et al. argue that this is but one of the consequences of the key theories currently used in most Western-type legal regimes to justify private property.[28] In IPR, for instance, prominent theorists like Fisher argue that IP rights can be viewed through the following four theoretical lenses:

1. Utility theory (or utilitarianism), which attempts to maximize net social welfare.
2. Labour theory, which recognizes and rewards individuals for their work.
3. Personality theory, which acknowledges that creativity is a form of self-expression and selfhood.
4. Social planning theory, which views property as a good that can be used to build a just and attractive culture.[29]

Currently, the mainstream IP system predominantly relies on utility theory, which aims to assign to inventors and authors exclusive rights 'sufficient' to incentivize them to develop and make available inventions and works of art that they otherwise would not produce.[30] The theory is also currently interpreted and applied so as to heavily focus on economic aspects and incentives, and has a decidedly owner-centric approach.[31] As a consequence, all the requirements needed in order to obtain IPR protection are interpreted by using an economic incentive-based approach, where only humans are considered capable of creating and benefiting from innovations: a strong anthropocentric view.[32]

These claims are evident on examining two of the key pillars of private law, namely the person and the concept of property.[33] In relation to the concept of 'the person' (the right holder), the so called 'monkey selfie dispute' is particularly illustrative. In this dispute the copyright status of selfies taken by Celebes macaques from a national park in North Sulawesi, Indonesia was questioned.[34] The selfies had been taken

24. Heiskanen 2018. See also the Charter of Fundamental Rights of the European Union, 2012/C 326/02, Art. 37.
25. Consolidated version of the Treaty on the Functioning of the European Union, Official Journal C 326, 26/10/2012 P. 0001 – 0390.
26. Sjåfjell et al. 2018.
27. Pihlajarinne & Ballardini 2020.
28. Ballardini et al. 2020.
29. Fisher 2001.
30. Landes & Posner 2003.
31. Fisher 2001; Alexander & Peñalver 2012; Butler 2017.
32. Ballardini et al. 2019.
33. Micklitz 2017.
34. Guadamuz 2016.

using photographic equipment owned by British nature photographer David Slater, who was on a three-day trip to take pictures of a troupe of monkeys. The shooting session lasted thirty minutes and produced hundreds of pictures, three of which were spectacular. Slater promptly published them in the *Daily Mail* newspaper. Soon Wikimedia Commons and the blog Techdirt picked up these three images, tagging them as being in the public domain. The first dispute in 2014 was between Wikipedia and Slater, who claimed copyright on the images.[35] Then in 2015 the People for the Ethical Treatment of Animals sued Slater in a California court on behalf of the monkey, claiming that they had copyright on the selfies.[36] At the end of the day, the disputes were resolved with the judge declaring that the monkey is not an author within the meaning of the U.S. Copyright Act, as non-humans are not capable of producing original works of art under the meaning of copyright law.[37]

Indeed, this decision is ultimately the consequence of the way we currently interpret certain eligibility criteria in copyright law, especially the criteria of originality. Moreover, this also relates to the fact that animals like monkeys do not have legal capacity since they are 'non-persons'. However, the relevance of this case does not lie only in whether or not non-humans should be entitled to IP rights. Instead, the case sheds light over the strong anthropocentric and economic focus of property systems such as IPR. The same approach transpires when one looks at the pillar of private property in private law regimes like IP. Main reliance on economic and utilitarian types of theories has supported the development of practices where economic efficiency and private ownership prevail, rather than other societal values such as respect for the natural environment. This disturbs the delicate balance between protection and access to innovations.[38] A system that places the economic interests of the (human) property owner at the centre and has as its primary aim that of providing incentives for individuals, inevitably leads to a framework where 'strong' property rights (usually tied to profitable outcomes) prevail, while exceptions to those rights are kept to a minimum. In a way, this system is trapped in its own rules, where profit is the main driver, while respect for nature is usually ignored.

4. Rights of Nature: Environmental Ethics Perspectives

In environmental ethics, the notion of giving nature legal rights – also called 'rights of nature' – involves and gives primacy to the flourishing and protection of non-human nature. This is to recognize non-human nature as an entity that can have rights such as the right to exist, persist, regenerate and flourish as much as and on an equal footing with humans. This framework is concerned not only with defending the RoN but also with promoting a radical change to overcome the strong anthropocentric attitude where nature has usually been treated instrumentally as 'property' and a 'commodity' (that is, as an object, as opposed to a subject of rights). This anthropocentric criterion and view of nature is considered not only as a challenge to possible solutions but also as part of the problem itself. On the other hand, RoN is a paradigm where humans' interests are at the same level as those of a non-human nature.

Until the 1970s the majority of Western traditional moral theories were human-centred. In that period the birth of environmental ethics

35. *Ibid*.
36. *Ibid*.
37. Arguably, similar cases could arise with other non-human parts of nature, not only with animals. For instance, devices have been invented to "translate" the music produced by plants into human-audible sounds. As with the case in the monkey selfie, should anyone try to claim copyright on such pieces of plants-created music? See e.g. https://www.plantwave.com/.
38. Pihlajarinne & Ballardini 2020.

as an academic discipline together with other environmental movements paved the way for rational arguments to assign moral standing to non-human nature.[39] Originally, the notion of rights of nature emerged in the United States in 1972 during the court case *Sierra Club vs. C.B. Morton*.[40] The Sierra Club, one of the most influential grassroots environmental organizations in the USA, opposed a plan by Walt Disney Enterprises to build a ski resort in the Mineral King Valley of Sequoia National Forest, California. At the same time, legal scholar Stone[41] argued that non-human entities in nature, such as oceans, forests and trees, should have legal rights. In Stone's model, the interests of these natural elements could be represented in courts of law by trustees or guardians.[42] Some years later, the philosopher Rolston introduced the idea of ascribing intrinsic value to ecological wholes or collective entities such as species.[43] According to Rolston, if something has intrinsic value, it means that it has a value as such, as an end in itself and therefore should have rights of its own.[44] This view contrasts the approach where nature is considered as being of purely instrumental value, as being used for human needs, or as a means to other ends.[45] However, in contrast to Stone, Rolston did not refer to legal status but to a moral right[46] or moral status of non-human nature, independently from human needs. Legal rights are written in legal codes; for each legal right there is a law and, when a law is infringed, there are consequences.[47] Moral rights, on the other hand, are not codified in legal documents and they refer to ethical status, moral considerability or moral standing. They exist within social moralities and generally do not involve legal consequences in the case of violation.[48] Later on, Rolston's view was found to be a line of argumentation to give moral rights to non-human nature since many philosophers agreed that having "intrinsic value generates a *prima facie* direct moral duty on the part of moral agents to protect it",[49] or to abstain from damaging it.[50] Despite their differences, both Stone and Rolston brought forth a non-anthropocentric view that conceives of nature in a legal framework that, in contrast to the anthropocentric one, is not focused solely on human interests and needs alone.

Moreover, among the non-anthropocentric views of nature we can find sentient theories, as for instance animal rights ethics,[51] that grant moral standing not only to humans but also to non-human animals. Biocentric[52] and ecocentric ethics are non-anthropocentric theories that extend moral considerability not only to non-human animals but also to other parts of nature. Biocentrists recognize moral standing in humans, animals and every part of nature which is alive, with the element of "life" as the distinguishing feature for moral rights.[53] Ecocentrists, on the other hand, also include inanimate parts of nature such as rocks, caves, mountains, and the like,[54] advancing autonomy, existence for its own sake, having a good on its own or fostering "the integrity, stability and beauty of the biotic community"[55] as reasons for moral standing.

39. Brennan & Lo 2015.
40. Sierra Club versus C.B. Morton 1972 (405 U.S. 727).
41. Stone 1972; 1974.
42. Kawall 2017.
43. Rolston 1975.
44. *Ibid*.
45. Kant [1788]1996; Brennan & Lo 2015.
46. Hereby understood not as 'moral rights' in copyright law.
47. Orend 2002.
48. *Ibid*.
49. Brennan & Lo 2015, 1. For the sake of this paper humans are the moral agents and the valuers.
50. O'Neill 1992; Jamieson 2002.
51. Regan & Singer 1976; Clark 1977.
52. Taylor 1986.
53. *Ibid*.
54. Naess 1984.
55. Leopold 1949, 224–225.

Many arguments are available to support the RoN. Among these, animal rights advocates claim that because animals are sentient beings – meaning that they have the capacity to suffer and feel pain – they should have moral standing. Hence, they promote a hierarchical RoN that includes only humans and non-human animals, based on an individualistic view. Brennan goes further and, similarly to Stone, claims that natural things such as valleys, forests and rivers are autonomous, self-organized systems which have their own way of existing, and because of that they have interests, such as an interest in developing and surviving,[56] therefore they should be respected morally and have legal rights. Rodman adds another perspective according to which we should think of our relation with nature in less moral and legal terms, and adopt a different principle based on the simple acknowledgment that "non-human species exist 'in their own rights'…" intrinsically and not merely for human purposes.[57] Based on this principle we should extend moral standing to all living and non-living nature including not only what is animate but other inanimate parts of nature such as air, clouds, mountains, stones, deserts, and so on. Naess, the initiator of Deep Ecology, instead alleges that all organisms and creatures in nature, both human and non-human, have an intrinsic value in virtue of the fact that they are all equal members of the same community, based on a holistic view. For this reason, human and non-human nature each possess moral worth and therefore deserve respect and thus protection.[58]

In reply to Stone and other non-anthropocentrists, Feinberg claims that in order to enjoy moral standing and to be a potential holder of rights, something must have interests that can be represented in the courts and it must be able to benefit from its own right.[59] Therefore Feinberg counterargues that we are unable to determine the needs, interests and wishes of a mountain on its own, unless we assign similarities to human interests. In addition, the philosopher Norton in his early work argues that we do not necessarily need a non-anthropocentric viewpoint to support environmental ethics but we could also advocate for a 'weak anthropocentrism.'[60] Strong anthropocentrism views the natural environment as a "storehouse of raw materials to be extracted and used"[61] for human interests, needs and preferences. It ascribes intrinsic value to human beings alone[62] and, therefore, moral superiority to them compared to all other species on the planet. Weak anthropocentrism, on the other hand, ascribes intrinsic value to the whole of nature even though greater intrinsic value is assigned to humans than to nature's non-human components.[63]

Even though we acknowledge the importance of biocentric and ecocentric arguments – that they are appealing from an ecological and a more just viewpoint – we are aware of their limitations in light of the current legal and societal status quo. In fact, they have proven highly difficult to actualize from a logistic viewpoint,[64] ending up at times with solutions that would sacrifice human lives to save non-human nature. We are also aware of the blurry line separating strong and weak anthropocentrism, but we think that embracing weak anthropocentrism is a further step that can be accepted in the current legal system and yet at the same time it acknowledges the importance of nature. In fact, in the debates on RoN we position ourselves within the weak anthropocentric domain where non-human nature meets more than hu-

56. Brennan 1984.
57. Rodman 1977, 109.
58. Naess 1984.
59. Feinberg 1974.
60. Norton 1984.
61. Norton 1984, 135.
62. Brennan & Lo 2015.
63. *Ibid*.
64. Callicott 1999.

man needs but it can, on the other hand, enrich human experience for its aesthetic, ecological and recreational value.

In accordance with Norton, for instance, lessons learnt from non-human nature provide essential guidance in constructing a rational worldview.[65] Non-human nature can also be "an important source of inspiration in value formation",[66] contributing to human quality of life. Most importantly, together with these instrumental values, the moral value of non-human nature, considered as inclusive (such as in the ecosystems that form it, as in the Indian and New Zealand cases, to be discussed below), is based on the intrinsic worth of its existence, for what it is in itself, which is independent of any economic value.[67] From an ethical standpoint correlative to recognition of the intrinsic value of non-human nature, there exists a "negative duty not to destroy, harm, damage, vandalize or misuse (it…) and a positive duty to protect it from being destroyed, harmed, damaged"[68] and so forth. Similarly to the significance for our society of an important – indeed priceless – artistic work such as the Mona Lisa, we argue that non-human nature also has such a non-instrumental value that we should protect from exploitation. Thus, the intrinsic value of nature does not exclude its instrumental value for humanity.

A world in which humans have a higher recognition of non-human nature, for which we care and ascribe an intrinsic value, is better than the opposite. Similarly to the philosopher O'Neill's view,[69] we hold that care for nature is part of a flourishing human life. Therefore, having a weak anthropocentric view, which prioritizes the flourishing of non-human nature, promotes care, respect and protection for it, at the same time enriching human life.

5. Non-Human Nature as a Subject of Rights: The Story Thus Far

Legal personhood is not engraved in stone, while the scope of this conception is variable. The rules related to legal personhood and legal capacity are defined by the social and political system and are dependent on time, culture and often even geographical circumstances. For instance, in the past things like temples in ancient Rome and church buildings in the Middle Ages were regarded as the subject of certain types of legal rights.[70] Slaves were considered property and did not have legal personhood in the times of the ancient Romans, yet they were subjects of duties and some rights.[71] As above explained, the scope of legal capacity depends on the role and function of the legal person in society and the legal system. The range of legal capacity is adapted to the function of the legal person. Generally speaking, though, one important common denominator for either expanding the concept of legal personhood or extending rights and/or duties, is to better protect something or someone that would otherwise be in worse off positions from the legal standpoint. The question we ask here is whether there is a need to award some degree of legal capacity to elements of nature other than humans in order to drive humans to better respect the environment. We are especially interested in the effects of such moves in the context of private property regimes such as IPR. Before we go to this specific application, though, it is important to present some selected examples where RoN types of framework have already been established, even though in other fields of law. The purpose is twofold: on the one hand we aim to shed light on the structure (anthropocentric or non-anthropocentric) followed thus far for

65. Norton 1984.
66. Norton 1984, 135.
67. Taylor 1984. This is what Taylor calls 'intrinsically valued' and Hargrove (1992) calls 'anthropocentric intrinsic value'.
68. Taylor 1984, 150.
69. O'Neill 1992.
70. Finkelman 2012.
71. Fede 1992.

these types of legal construction. On the other, the goal is to elucidate whether or not the actual outcome stemming from these initiatives meets their initial objective.

Pressed by the environmental crisis, various legal frameworks have been created with the aim of recognizing the value of non-human nature, via turning it into a legal person assigned various degrees of legal capacity. Generally, these structures have emerged in countries which host relatively robust and vocal iIndigenous communities, who are inclined to approach non-human nature more fairly. The attempts made thus far can be grouped into three main categories. First, some nations have tried to regulate the RoN by including them in their constitutions: for example, Ecuador. Second, countries have regulated the issue by narrowly assigning rights and duties to specific ecosystems through *ad hoc* pieces of legislation, as in the case of the Whanganui River in New Zealand. Third, some jurisdictions have started to include arguments related to the importance of respecting non-human nature through judicial interpretations, as exemplified in the case of the Ganges and Yamuna rivers in India.

In relation to the first category, Chapter 7 of the Ecuadorian Constitution is titled "Rights of nature". Article 71 states that "Nature, or *Pacha Mama*, where life is reproduced and occurs, has the right to integral respect for its existence. […]". In other words, the RoN states up-front that societal harmony with nature is a priority for Ecuador. Moreover, the three rights that are recognized as belonging to nature are: 1) the right to integral respect for its existence; 2) the right to maintenance and regeneration of its life cycles, structure, functions and evolutionary processes; and 3) the right to be restored (Articles 71–74). Any legal person has the authority to call upon the public authorities in Ecuador to enforce RoN (Article 71). The 'guardian' for ensuring that these rights are respected and enforced is the state, which is given both general and specific affirmative duties to prevent environmentally harmful conduct and regulate environmental services (Article 72). Importantly, the Constitution establishes that all laws implicating environmental issues should be interpreted so as to favour protection of nature when ambiguity arises (Article 395).[72]

The Ecuadorian Constitution presents RoN as an alternative solution that fosters sustainability and confronts the strongly anthropocentric neoliberal model.[73] It has been argued that with this pioneer move Ecuador took an ecocentric approach, where human beings have the same value as any other creature on the planet. However, closer analysis shows that, even though the Ecuadorian legal framework is no longer in the strong anthropocentric realm, it nonetheless remains based on a human-centred perspective where nature has gained more importance and respectability. On a similar line of thought, Knauss claimed that introducing the RoN in the Ecuadorian Constitution was a move to foster human stewardship of the planet in the age of the Anthropocene.[74] Moreover, this example creates only constitutional rights, not specific private law/private property rights – which leaves open the oft-used argument that constitutional law does not and shall not affect private law.

Indeed, there are pros and cons in the Ecuadorian example that we need to consider. First of all, this case is emblematic to show what type of legal tools, strategies and contestation dynamics have been used to argue in favour of, or against, RoN. The fact that, in the Ecuadorian constitutional system, the state will ultimately hold power on the final decision in disputes over environmental affairs is regarded as problematic when conflicts between RoN and economic interests arise. For instance, soon after its Con-

72. See English translation of the Ecuadorian constitution at: http://pdba.georgetown.edu/Constitutions/Ecuador/english08.html.
73. Kauffman & Martin 2017.
74. Knauss 2018.

stitution changed, Ecuador realized the possible friction between RoN actualization and the government's agenda of favouring mining, oil extraction and economic projects, recognizing that RoN might discourage foreign investments in development projects (like construction of roads and infrastructure construction, plant for oil extraction, and so on). As a consequence, in 2009 the Ecuadorian state passed the Mining Law, granting itself power to relax the RoN regulations in cases where national interests needed to be prioritized.[75] Hence the state, using RoN instrumentally, promoted environmentally friendly – if that were ever possible – mining practices in the name of national development. It was argued that this would offer the Ecuadorian people the opportunity of good living, or 'vivir bien' wisdom.[76] Moreover, looking at this issue from the perspective of private law regimes, these types of dispute do not actually affect the behaviour of market actors (which is the primary goal of private law).

At the same time, lessons can be learned from the *Wheeler* case,[77] where residents sued the local government following ecosystem damage caused by debris from a road expansion project. This case was important for different reasons. On the one hand, the plaintiffs appealed to the RoN instead of traditional property rights and won the case on the basis of ecocentric principles. On the other hand, although RoN recorded a victory in court, practical enforcement shows a lack of implementation from the government's side,[78] since the damage to the river was never fully repaired (by January 2018). Even though enforcement was disappointing, the court decision truly aimed to safeguard RoN. Moreover, this was the first dispute where the RoN were given priority over other constitutional rights.[79]

Regarding the second category of attempts, where RoN have been established through specific laws, an example is represented by the longstanding negotiations and dispute settlement between the Crown and Maori representatives, where New Zealand decided to award rights to three specific ecosystems: the Whanganui River, the Te Urewera National Park, and Mount Taranaki. For instance, in the Whanganui River Claims Settlement Act[80] the river is declared a legal entity, with the rights and duties of a judicial person according to the law of New Zealand, including the ability to sue those who harm it. In practice, this framework works in such a way that the river will be protected by two guardians: one from the iIndigenous community (Whanganui Iwi) and one from the government. By law each of these guardians is obliged to safeguard the river's interests and care for its long-term future.[81]

According to Knauss, while promoting the RoN, this case also promotes the human stewardship of planet Earth via the use of the language of individual legal rights and mirroring the worldview of iIndigenous people.[82] The survival and wellbeing of the Whanganui Iwi, a Māori people, heavily depends on the homonymous river, which is considered as a living entity, as an ancestor of this people.[83] Causing harm to the river means causing detriment to this people. This is part of Māori holistic cosmology, or worldview, which sees the Māori as part of the universe.[84] This case highlights the importance of assigning intrinsic value to a part

75. Arsel 2012.
76. Kauffman & Martin 2017, 132.
77. Wheeler c. Director de la Procuraduría General Del Estado de Loja, 2011. Juicio No. 11121-2011-0010 ('Wheeler'), original in Spanish, retrieved from <https://blogs.law.widener.edu/envirolawblog/2011/07/12/ecuadorian-court-recognizes-constitutional-right-to-nature/>.
78. Daly 2012.
79. *Ibid*.
80. Te Awxa Tupua, Whanganui River Claims Settlement Act 2017, New Zealand Act No. 7, Section 14(1).
81. Collins & Esterling 2019.
82. Knauss 2018.
83. Young 2017.
84. Roy 2017.

of nature, such as a river,[85] and for this reason to recognize its legal rights in court. According to Knauss,[86] this is precisely the move to juridically justify human stewardship of natural elements that are awarded legal status.

Finally, in relation to the category where needs of non-human nature have been considered through case law interpretation, interesting examples come from the Ganges and Yamuna rivers and the cases of the Gangotri and Yamunotri glaciers in India. When faced with continuous degradation of the environmental quality of the waters of these places, the Uttarakhand High Court decided to formally recognize the Ganges river including the Yamuna river and the Gangotri and Yamunotri glaciers and "all their tributaries, streams, every natural water flowing with flow continuously or intermittently of these rivers'' as "living entities" and "having the same legal status as human beings".[87] The justification for this move was that it made acts like polluting or damaging the rivers legally comparable to assault or even murder. In addition, the High Court explicitly held that these ecosystems were "breathing, living and sustaining the communities''. The Court designated three 'guardians' to formally "protect, conserve and preserve" these rivers. However, the Uttarakhand state government, where the rivers originate, argued that the ruling was not practical and could lead to complicated legal situations, even claims against the rivers in cases of flooding or drowning.[88]

This case can be seen as an integration of the Ecuadorian and New Zealand case since it highlights the local and global extension of the ecosystem where rivers and their affluents belong. The glaciers, their fresh waters and the health of their ecosystem are significant not only for the local people and iIndigenous local culture in India, but they mirror worldwide climate problems, since permanent ice and glaciers are indicators of a healthy global climate.

In sum, in all these cases we can notice that applying the RoN went from theory to practice, from a utopia to reality. In all these examples the RoN speak a non-utilitarian language not referring to the utility of non-human nature and not even to the benefit of the majority population nor to a dominant class. The interesting effect of legal structures such as the RoN is the normativity of their domain of influence. Once established, they generate obligations that differ from the original political interest "that might have motivated their very acceptance in the first place".[89] In the legal context when some entity holds rights, the reason for having those rights is no longer challenged. This mechanism can create unexpected consequences to prevent or avoid future political action linked, at times, to future environmentally friendly action such as obligations for climate change and global warming or others such as a prominent human role or stewardship in applying and implementing the RoN, for instance.

As we have seen, all three countries have had Indigenous pressure groups, creating more reasons to acknowledge RoN than in other contexts.[90] This in turn has fostered use of a non-Western worldview and notions of transforming the human relationship with non-human nature in the field of law. We can see in all three cases – although in the Indian case it appears even clearer – that stewardship is the prevailing tool for managing the rights and duties of legal persons that cannot represent themselves in court, such as minors. It is enough to read parts of the Indian judges' reasoning to notice an evident utilitarian and thus anthropocentric claim:

85. Bosselmann 2017.
86. Knauss 2018.
87. See Uttarakhand High Court, *Mohd. Salim vs. State of Utturakhand & Others* 2017.
88. See *Union of India vs Lalit Miglani* on 27 November 2017.
89. Knauss 2018, 713.
90. Knauss 2018.

> "A juristic person can be any subject matter other than a human being to which the law attributes personality for good and sufficient reasons. Juristic persons being the arbitrary creations of law, as many kinds of juristic persons have been created by law as the society required for its development".[91]

Juristic persons can be identified only by human-made law and this creation is made for the sake of societal goals such as development of human societies. Yet, using the anthropocentric tool of stewardship to justify the non-anthropocentric RoN claim based on the intrinsic value of non-human nature is in itself a contradiction. Indeed, these cases are emblematic examples of the challenge in following non-anthropocentric approaches in law that need human intervention for their enforcement since the move of awarding RoN clearly falls within human responsibilities. As such, one could ask whether a better solution might instead be found within the realm of weak anthropocentrism where the intrinsic and non-economic value of non-human nature is recognized in the context of RoN – as we argue below. In addition, it should also be noted that none of these solutions has meant that private law (for example, regulation of private property) has actually changed. In other words, the framework in which private law functions has not really been affected.

6. Raising Attention to Non-Human Nature's Interests Through Weak Anthropocentrism

As the above analysis shows, reliance by the Western legal system on 'strong' anthropocentrism, combined with a main focus on economic efficiency, has caused challenges for the legal framework (and, as a consequence, for society at large) in terms of fully respecting non-human parts of nature for what they are. This pattern is especially prominent in private property regimes like IPR.[92] Attempts to step aside from strong anthropocentrism towards a non-anthropocentric approach to law when dealing with environmental issues are under way in some countries, especially those with iIndigenous pressure groups. Yet, reality determines that a great discrepancy exists between the ecocentric objective that drove these initiatives and their ultimate results. In the Ecuadorian case, for instance, choosing to implement mining and other extraction activities, vital for the national economy and subsistence, led to never implementing the secondary sources of law related to RoN needed to strengthen constitutional law principles.[93] Indeed, all attempts so far have also remained at the level of constitutional rights only, with no link to how these new fundamental rights might affect or shape private law regimes. As a consequence, private law (and thus regulation of market behaviour) has not been affected at all by these efforts. In that light, one cannot help wondering: will we ever move away from anthropocentrism in law, in general, after all? As already mentioned, non-anthropocentric approaches such as biocentric and ecocentric arguments, although potentially highly valuable from an ecological and a fairness viewpoint, suffer from several limitations when considering the current legal and societal status quo. Could we not instead find a suitable solution within a more reasonable and moderate weak anthropocentric view? And if so, what would be the consequences of such a move to those regimes like private (intellectual) property fields where strong anthropocentrism is particularly predominant?

Acknowledging the importance of non-anthropocentric arguments, but also their limitations within the current legal framework, as well as the need to counteract strong anthropocentric attitudes, we propose adopting a 'weak'

91. High Court of Uttarakhand at Nainital 2017a, 10–11.
92. Ballardini, Kaisto & Similä 2020; Butler 2017.
93. Kauffman & Martin 2017.

anthropocentric perspective, where non-human nature has intrinsic worth, in the belief that within its framework are valid motivations to protect and respect the non-human elements of nature. The assumption is that humans are not the only subjects of moral consideration. Hence, this hypothesis relates to the possibilities and consequences of awarding moral and legal status to non-human nature, as well as developing a legal framework for RoN within the premises of weak anthropocentrism. This is a value theory whose worldview rationally highlights the close relationship between humans and non-human nature and its significance as a 'teacher' in human value formation through the experience of nature.[94] This worldview allows us to take a critical perspective on current strongly anthropocentric-based (and economic-based) legal theories and practices (like those in the field of IPR), providing an interesting basis for developing a novel legal framework of fundamental principles that puts humans in a position of respecting non-human nature. This new repositioning should recognize non-human nature as having an 'objective value', as the philosopher O'Neill suggests, namely a "value that an object possesses independently of the valuations of the valuers".[95]

Our analysis shows that all of the attempts so far to recognize RoN have focused on creating a system where the legal position of non-human and human parts of nature have been intentionally kept separate (with the former generally being subordinated to the latter). The case of Ecuador well illustrates this. While judges have played a truly significant role in interpreting and implementing the RoN in Ecuador, the vagueness of the constitutional text has many important issues unexplained in relation to lack of clarity in hierarchical power between humans and the fundamental rights of other entities in nature.[96] Indeed, this shows how the human/non-human nature division in law is problematic in terms of also prioritizing the interests of the environment. This is the main reason for failure and why the natural environment has yet to see the flourishing of a legal (and, more generally, a societal) system that actually gives the natural environment its due in terms of value and respect. We began this article by adopting a definition of nature as 'the whole web of life on the earth' which includes humans as well as non-human elements of nature. It is precisely this inclusive notion that would form the fundamental basis for a transition towards a legal system that better respects the natural environment. If, as we argue, a switch from 'strong' to 'weak' anthropocentrism through the creation of RoN is needed for such a change to occur, then we see no other way than to adopt a concept of 'nature' in law that includes both humans and non-human elements under the same umbrella.

In this transition, the following guiding principles could be useful:

1. Human beings should see more in non-human nature than a mere means to human ends.
2. A holistic umbrella for redefining nature (encompassing both human and non-human nature) in law means providing legal grounds for striking a proper balance between the interests of humans and the rest of nature.
3. Non-human parts of nature need to become legal subjects with a certain degree of legal capacity to limit human action damaging them. Recognizing non-human parts of nature as legal persons could put a limit on human interference and, when needed, put a stop to human exploitation of natural resources in a language – legal language – that humans understand and have to respect.

94. Norton 1984.
95. O'Neill 1992, 120.
96. Whittemore 2011.

This vision would advance a change in the theoretical approach that would enable creation of a more inclusive model. This inclusiveness would better reflect core principles related to respecting the natural environment holistically in all areas of law, including those, like IPR regimes, where societal values other than sustainability – such as economic efficiency – are currently predominant. As we have already observed, even if international treaties and agreements – like the TFEU and the Charter of Fundamental Rights of the European Union – recognize the importance of respecting the natural environment, these ways of protecting non-human parts of nature are clearly proving insufficient. Unless a clear link, as well as a proper way to balance the interests involved, between constitutional rights and private property rights is created – that is, unless we translate theoretical and constitutional initiatives into a private law framework – none of these legal instruments have any influence on private law and, thus, on market behaviour. Additionally, measures that attempt to channel respect for the natural environment sector by sector, fragmentarily – for instance including it in secondary laws or in case law interpretations – unavoidably lead to the confinement of such values to some areas of regulation only.

Specifically, in private law regimes like IPR, this move could provide the grounds needed for reconceptualizing important property law pillars, such as the pillar of the person and of property, in a way less dependent on strong anthropocentrism and utilitarianism with their focus on economic efficiency. As explained above, Fisher points out that even though the current Western IPR regime focuses heavily on a utilitarian approach, where the aim is to maximize net social welfare, other theories could be used to justify the existence and scope of the IPR system.[97] In this regard, 'social planning' types of theory, which view property as something that can be used to build a 'just and attractive' society, would seem a much more appropriate way to support the development of ethical practices in IPR that are better respectful of societal values (which in our case include nature). Overall, this change could provide 'more teeth' not just to pass IPR laws that are less strongly anthropocentric, that way incentivising more sustainable innovations, but also to enable the development of practices related to the use of private properties that better respect the natural environment for its intrinsic value.

This proposition does not mean that the same legal status and/or legal capacity should be granted to humans as well as to non-human parts of nature (principle 2). Various options could be considered at the level of theory and practice while developing the concrete details of how the RoN or even the legal framework could be built in accordance with this vision. Some such frameworks have already appeared in the literature. Above we have already discussed legal theoretical attempts to justify legal personhood of non-humans, like Kurki's 'bundle theory' in relation to animal rights, and other theories developed in the context of legal personhood to artificial intelligence.[98] Moreover, legal scholars like Wood and O'Neill take the approach of (strong) anthropocentrism for obligations, but not for rights.[99] Accordingly, they argue that rights of non-human nature could be developed on the basis of all obligation-bearers being human, while right holders can also be non-human. In addition, from the point of view of practices, a system of guardianship (e.g. a body of people, experts, or NGOs) could be envisioned in order to represent the interests and rights of non-human parts of nature (in the same way as in some of the cases presented in this paper). This structure could well be justified by our proposed weak anthropocentric

97. Fisher 2001.

98. Kurki 2019; Van den Hoven van Genderen 2018. See also Favre 2010; Pietrzykowski 2016; Pietrzykowski 2017.

99. Wood & O'Neill 1998.

approach, as opposed to a non-anthropocentric approach, as in the three cited cases.

Independently of how the legal framework would be shaped technically in order to incorporate the vision here proposed, claiming a certain degree of legal capacity or status for non-human elements of nature would undeniably allow it to enter the special domain of legal entities, this way being better recognized and therefore respected in the legal system. As stated by Leimbacher: "The moral obligation to nature [hereby understood as non-human nature] requires a legal enforcement".[100] Arguably, other legal tools could be used to reach the ultimate goal of enabling humans to respect and value non-human nature. For example, similar outcomes could be available by adjusting procedural rules, instead of granting legal personhood. As noted, however, diverse attempts – including by way of numerous environmental treaties, laws and regulations – have already been made to foster respect for the natural environment through law. However, these existing models are failing, as they do not fully reflect the shift that is needed to curb and, ideally, reverse continued environmental decline. Expanding the concept of legal personhood or extending rights and/or duties is traditionally the most effective way to better protect something or someone that would otherwise be in a worse position from the legal viewpoint. Importantly, if the aim is to acknowledge a concept of nature which is inclusive of both humans and non-human entities, as we here propose (principle 1), a certain degree of legal capacity (even if there would still be a difference in degree) for all parts of 'nature' seems to be a necessity. In the context of the time-honoured debate – on whether the law should reflect moral standards that already exist in society or whether law actually creates moral conduct – law does both according to the circumstances. In this case, law creates ethical conduct by reflecting the moral significance of nature both for its intrinsic value and for humanity. Some intellectuals, for instance, claim that protection of nature is a guarantee of human dignity[101] and of a good quality of life.

In concrete terms, in the private law context, this proposition would align with a growing academic scholarship that highlights the role of private property regimes such as IPR to better promote sustainability values. For example, Brettschneider has emphasized the importance of welfare while justifying the exclusion of others from private property as a regulatory solution.[102] Thus, the moral justification of private property can be found from a combination of individual freedom and the role of individuals in communities, namely as people bearing responsibilities and obligations towards others. For instance, starting from these building blocks it can be claimed that the moral foundation of private property actually lies in 'human flourishing'.[103] As an example, in relation to the cases cited in the field of IPR (section 3), this would not necessarily mean that, for example, IPR should be granted to non-humans (e.g. monkeys). As explained, whether IPR is or is not granted to non-humans is an issue that encompasses many more details and nuances than the question of fostering environmental protection in IP. On the other hand, however, this proposition could strengthen moral arguments against unfair practices where, for example, humans appropriate innovations created by non-human nature (a monkey). Indeed, this would overall enable possibilities to foster more environmentally sustainable developments and uses, such as practices that foster resource efficiency, like repairing and re-using, and of innovations via supporting a better balance between protection and access, either via more – or more effectively scoped – exceptions and limitations to rights, or

100. Leimbacher 1990, 38.

101. Moltmann & Giesser 1990.
102. Brettschneider 2012.
103. Alexander & Peñalver 2012. See also Alexander 2018; Akkermans 2019.

via a better balance between the breadth and width of the scope of protection.[104] More generally, it could provide a sound basis for translating 'sustainable property theory' into property rules that foster RoN.

We acknowledge that this might be yet another attempt to 'anthropomorphize' the natural environment. Yet, at the same time, the proposed overarching umbrella frame like an inclusive concept of 'nature' as presented here, could be seen as a step further towards understanding legal systems' limitations in the context of respecting the natural environment, hopefully until a framework where non-human parts of nature are fully recognized for their intrinsic worth, without being compared to humans or needing human intervention to be implemented.

7. Conclusions

We are living on the verge of a global and irreversible environmental crisis. The world's most eminent climate scientists are showing that "absolutely immense changes" are required to deliver a sustainable future and avoid the collapse of civilization.[105] Indeed, efforts around the globe are moving in multiple dimensions to tackle the problem. It is no coincidence that the European Commission has lately announced a solid plan for a European Green Deal to transform the EU economy and society to a more environmentally sustainable model, where sustainable innovation plays a central role (although very little is mentioned about private law and market regulation).[106] Yet the claim is that the measures required to stop or even reverse this trend are "too hard for the vast majority of people to contemplate"[107].

Reliance on strong anthropocentric views, coupled with the mainstream economic and owner-centric approach followed in most Western types of legal regimes (and especially prominent in some fields of law like private law) is deeply problematic. Arguably, a shift away from strong anthropocentrism in favour of weak anthropocentric perspectives could alleviate human abuses on the natural environment, therefore providing fruitful soil for growing practices that respect nature. In this discourse, the RoN concept is particularly relevant. The notion of RoN is present in both Western and non-Western thinking, but a unifying thread is the legal acknowledgement of the inclusion of humans in the concept of nature.[108] Ultimately, adoption of a weak anthropocentric approach might very well have repercussions on human behaviour in better acknowledging the important role of the natural environment in human life.

Even though some countries have already undertaken the path to adopting RoN in their legal system, our analysis shows that despite their non-anthropocentric goals, all the cases presented ended up needing human intervention. Thus, even though they paved the way for an ecocentric worldview, supported by Indigenous views of nature, there is still some way to go.

Consonant with RoN advocates, the problem lies in human-centred political, legal and market structures which exploit non-human nature and its resources for human needs and consumption with no moral questions being asked. Indeed, when humans and non-human nature

104. Even though these types of issue have been discussed in IPR in the context of human rights – e.g., freedom of speech, or access to health – the discourse on law and environmental sustainability is to date undeveloped. For more details of such propositions see Pihlajarinne & Ballardini 2020.
105. Moses 2020.
106. See Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions, The European Green Deal, Brussels 11.12.2019, COM(2019) 640 final.
107. See note 105 above.
108. Daly 2012; Kauffman & Martin 2017.

are ontologically different and distinct, and where humans occupy a position of superiority, it is easier to objectify non-human nature and consider it as just a commodity. Instead, RoN should be seen as a significant and non-utilitarian tool, as well as a value, to set limits on human agency and put forward a notion of fair coexistence between human and non-human nature. This approach is fundamentally the opposite of the capitalist model that objectifies non-human nature and privileges human superiority. It has been argued that acknowledging RoN is one of the highest ethical-juridical recognitions within the Western tradition since it identifies nature as a legal person.[109] A legal framework, developed around an inclusive concept of 'nature' in law, following a weak anthropocentric approach, and where non-human elements of nature become legal subjects, would enable the development of practices that would ultimately lead a transformation towards a 'more just' society that respects the natural environment and recognizes it for its intrinsic value. After all, as the Chief Seattle of the Suquamish tribe said in 1848: "This we know; the earth does not belong to man; man belongs to the earth. This we know. All things are connected".[110]

Acknowledgements: The authors would like to thank all those who have commented on previous versions of this draft, especially the ValueBioMat researchers Anette Alen-Savikko and Juha Vesala, Jukka Similä, Bram Akkermans, Julian Reid, Markku Oksanen, Simo Kyllönen and Iiris Kestilä.

Bibliography

Akkermans, B. 2019. Sustainable Property Law: Towards a Revaluation of Our System of Property Law. In Bram Akkermans and Gijs van Dijck (eds.): Sustainability and Private Law. The Hague: Eleven International Publishing.

Alexander, G.S. 2018. Property and Human Flourishing. New York: Oxford University Press.

Alexander, G.S. and Peñalver, E.M. 2012. An Introduction to Property Theory. Cambridge: Cambridge University Press.

Arsel, M. 2012. Between 'Marx and Markets'? The State, The 'Left Turn' And Nature in Equador. Tijdschrift Voor Economische En Sociale Geografie, 103:2, 150–163.

Ballardini R.M., Kaisto J. and Similä J. Developing Novel Property Concepts in Private Law to Foster the Circular Economy. Journal of Cleaner Production, 279, 123747.

Ballardini R.M., Kan H. and Roos T. 2019. Digital Distribution of AI Generated Content: Authorship and Inventorship in the Age of Artificial Intelligence. In Taina Pihlajarinne, Juha Vesala and Olli Honkkila (eds.): Online Distribution of Content in the EU. Cheltenham: Edward Elgar Publishing.

Bosselmann, K. 2017. The principle of sustainability transforming law and governance. Abingdon: Routledge.

Boyd, D.M.2017. The Rights of Nature, A Legal Revolution that Could Save The World. Toronto: ECW Press.

Brennan, A. 1984. The Moral Standing of Natural Objects. Environmental Ethics, 6:1, 35–56.

Brennan, A. and Lo, Y-S. 2015. Environmental Ethics. The Stanford Encyclopedia of Philosophy (Winter 2015 Edition).

Brettschneider, C. 2012. Public Justification and the Right to Private Property; Welfare rights as Compensation for Exclusion. The Law & Ethics of Human Rights, 6:1.

Butler, L., 2017. Property as a Management Institution. Brooklyn Law Review, 82:3, 1215–1274.

Callicott, J. B. 1999. Beyond the Land Ethic: More Essays in Environmental Philosophy. Albany: State University of New York Press.

Carrington, D. 2020. Coronavirus: "'Nature is sending us a message', says UN environment chief", The Guardian, Wed 25 Mar 2020, <https://www.theguardian.com/world/2020/mar/25/coronavirus-nature-is-sending-us-a-message-says-un-environment-chief>.

The Charter of Fundamental Rights of the European Union, 2012/C 326/02.

Clark, S.R.L. 1977. The Moral Status of Animals. Oxford: Oxford University Press.

Crutzen, P. J. and Stoermer, E. F. 2000. The "Anthropocene". Global Change Newsletter, 41, 17–18.

109. Knauss 2018.
110. Shiva 2005, 1.

Collins, T. and Esterling, S. 019. Fluid Personality: Indigenous Rights and the Te Awa Tupua (Whanganui River Claims Settlement) Act 2017 in Aotearoa New Zealand. Melbourne Journal of International Law, 20:1, 197–220.

Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions, The European Green Deal, Brussels 11.12.2019, COM(2019) 640 final.

Daly, E. 2012. Ecuadorian Exemplar: The First Ever Vindications of Constitutional Rights. Review of European Community & International Environmental Law, 21:1, 63–66.

Emmenegger S. and Tschentscher A. 1994. Taking Nature's Rights Seriously: The Long Way to Biocentrism in Environmental Law. Georgetown International Environmental Law Review, 1:3, 545–592.

Ecuadorian constitution (English translation) at: <http://pdba.georgetown.edu/Constitutions/Ecuador/english08.html>.

Favre, D., 2010. "Living Property: A New Status for Animals Within the Legal System", 93 Marquette Law Review 1021, 1024.

Fede, A. 1992. People Without Rights: an Interpretation of the Fundamentals of the Law of Slavery in the US South, New York: Routledge.

Feinberg J., 1974. The Rights of Animals and Unborn Generations. In William T. Blackstone (ed.): Philosophy and Environmental Crisis. Athens: University of Georgia Press.

Finkelman, P. 2012. Slavery in the United States. In Jean Allain (ed.): The Legal Understanding of Slavery: From the Historical to the Contemporary. Oxford: Oxford University Press.

Fisher, W. 2001. Theories of Intellectual Property. In Stephen R. Munzer (ed.): New Essays in the Legal and Political Theory of Property. Cambridge: Cambridge University Press.

Gaines, S.E. 2014. Reimagining Environmental Law for the 21 st Century. Environmental Law Reporter, 44:3, 10188–10216.

Gills, B. and Morgan, J. 2019. Global Climate Emergency: after COP24, climate science, urgency, and the threat to humanity. Globalizations, 17:6, 885–902.

Guadamuz, A., 2016. The monkey selfie: copyright lessons for originality in photographs and internet jurisdiction. Internet Policy Review, 5:1.

Harari Yuval, N. 2019. 21 Lessons for the 21 st Century. London: Vintage.

Hargrove, E. C. 1992. Weak anthropocentric intrinsic value. The Monist, 75:2, 183–207.

Heiskanen, H. 2018. Towards Greener Human Rights Protection: Rewriting the Environmental Case Law of the European Court of Human Rights. Acta Universitatis Tamperensis 2367. Tampere: Tampere University Press.

High Court of Uttarakhand at Nainital (2017a). Writ Petition (PIL) No. 126 of 2014, 20 March 2017.

Hsiao E.C. 2013. Whanganui River Agreement – Indigenous Rights and Rights of Nature., Environmental Policy and Law, 42, 371–375.

IPBES. 2019. Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. E. S. Brondizio, J. Settele, S. Díaz, and H. T. Ngo (eds.). IPBES secretariat, Bonn, Germany.

Jamieson, D. 2002. Morality's Progress: Essays on Humans, Other Animals, and the Rest of Nature. Oxford: Clarendon Press.

Kant, I. [1788]1996. Critique of practical reason. In I. Kant *Practical Philosophy*. Tr. and ed. by M. J. Gregor. New York: Cambridge University Press.

Kauffman, C. and Martin, P. L. 2017. Can Rights of Nature Make Development More Sustainable? Why Some Ecuadorian lawsuits Succeed and Others Fail. World Development 92: 130–142.

Kawall, J. 2017. A History of Environmental Ethics. In Stephen M. Gardiner and Allen Thompson (ed.): The Oxford Handbook of Environmental Ethics. Oxford: Oxford University Press.

Knauss, S. 2018. Conceptualizing Human Stewardship in the Anthropocene: The Rights of Nature in Ecuador, New Zealand and India. Journal of Agricultural and Environmental Ethics, 31, 703–722.

Kurki, V. A. J. 2019. A Theory of Legal Personhood. Oxford: Oxford University Press.

Landes, W. and Posner, R. 2003. The Economic Structure of Intellectual Property Law. Harvard: Harvard University Press.

Leimbacher, J. 1990. The rights of Nature. In Lukas Vischer (ed.): Rights of future generations; Rights of nature: proposals for enlarging the universal

declaration of human rights. Geneva: World Alliance of Reformed Churches.

Leopoldo, A. 1949. A Sand County Almanac, and Sketches Here and There. New York: Oxford University Press.

MacCormick, N. 2007. Institutions of Law: An Essay in Legal Theory. Oxford: Oxford University Press.

Magallanes, C. 2015. Māori cultural rights in aotearoa New Zealand: Protecting the cosmology that protects the environment. Widener Law Review, 21:2, 273–328.

Margil, M. 2017. India court declares "Personhood" of glaciers and ecosystems. Press Statement, 3 April 2017. <https://celdf.org/2017/04/pr-india-court-declares-personhood-glaciers-ecosystems/>.

Micklitz, H-W. 2017. The constitutional transformation of private law pillars through the CJEU. In Hugh Collins (ed.): European contract law and the charter of fundamental rights. Cambridge: Intersentia.

Moltmann, J. and Giesser, E. 1990. Human rights, Rights of Humanity, and Rights of Nature. In Lukas Vischer (ed.): Rights of future generations; Rights of nature: proposals for enlarging the universal declaration of human rights. Geneva: World Alliance of Reformed Churches.

Moses, A. 2020. 'Collapse of Civilisation Is the Most Likely Outcome': Top Climate Scientists. Voice of Action. Melbourne: Australia, <https://www.resilience.org/stories/2020-06-08/collapse-of-civilisation-is-the-most-likely-outcome-top-climate-scientists/>.

Naffine N. 2012. Legal Personality and the Natural World: On the Persistence of the Human Measure of Value. Journal of Human Rights and the Environment, 3:1, 63–83.

NASA. 2001. Earth observatory, Gangotri Glacier, Himalaya, <https://www.earthobservatory.nasa.gov/images/4594/retreat-of-the-gangotri-glacier>.

Norton, B. G. 1984. Environmental Ethics and Weak Anthropocentrism. Environmental Ethics, 6:2, 131–148.

Næss, A. 1984. A defence of the Deep Ecology Movement. Environmental Ethics, 6:3, 265–270.

O'Neill, J. 1992. The Varieties of Intrinsic Value. The Monist, 75:2, 119–37.

Orend, B. 2002. Human Rights: Concepts and Context. Ontario: Broadview Press.

Paris Agreement, United Nations Treaty Collection, 8 July 2016.

Pihlajarinne, T. and Ballardini, R.M. 2020. "Paving the way for the Environment – Channeling 'Strong' Sustainability into the European IP System", 42 *E.I.P.R.* 239.

Pietrzykowski, T. 2016. Beyond Personhood: From Two Conceptions of Rights to Two Kinds of Right- Holders. In Tomasz Pietrzykowski and Brunello Stanciolli (eds.): New Approaches to the Personhood in Law. Frankfurt am Main: Peter Lang.

Pietrzykowski, T. 2017. The Idea of Non- personal Subjects of Law. In Visa A. J. Kurki and Tomasz Pietrzykowski (eds.): Legal Personhood: Animals, Artificial Intelligence and the Unborn. Springer.

Piketty, T. 2020. Capital and Ideology. Harvard: Harvard University Press.

Prempeh, H.K. 2007. Africa's 'constitutionalism revival': False start or new dawn? International Journal of Constitutional Law, 5:3, 469–506.

Regan, T. and Singer, P. (eds.). 1976. Animal Rights and Human Obligations, Englewood Cliffs: Prentice Hall.

Rodman, J. 1977. The Liberation of Nature?. Inquiry, 20, 83–145.

Rolston III, H. 1975. Is there an Ecological Ethic? Ethics 85:3, 93–109.

Roy, E. A. 2017. New Zealand river granted same legal rights as human being. *The Guardian*. 16 March 2017, <https://www.theguardian.com/world/2017/mar/16/new-zealand-river-granted-same-legal-rights-as-human-being>.

Saint-Prix Berriat, J. 1829. Rapport et recherches sur les procès et jugements relatifs aux animaux. Paris: Imprimerie de Selligue.

Shiva, V. 2005. Earth democracy: justice, sustainability, and peace, Cambridge, MA: South End Press.

Sjåfjell, B, Mähönen, J, Johnston, A and Cullen, J. 2018. Obstacles to Sustainable Global Business. Towards EU Policy Coherence for Sustainable Development. SMART Project. Available at SSRN: <https://ssrn.com/abstract=3354401> or <http://dx.doi.org/10.2139/ssrn.3354401>.

Stone, C. D. 1972. Should Trees Have Standing? Toward Legal Rights for Natural Objects. Southern California Law Review, 45:2, 450–501.

Stone, C.D. 1974. Should Trees Have Standing? Los Angeles: Kaufmann.

Te Awxa Tupua, Whanganui River Claims Settlement Act 2017, New Zealand Act No. 7, Section 14:(1).

Taylor, P. W. 1984. Are Humans Superior to Animals and Plants? *Environmental Ethics* 6:2, 149–160.

Taylor, P. W. 1986. Respect for Nature, Princeton N.J.: Princeton University Press.

The Treaty on the Functioning of the European Union (Consolidated version), Official Journal C 326, 26/10/2012 P. 0001 – 0390.

Tuori, K. 2002. Critical Legal Positivism. Aldershot: Ashgate.

United Nations Convention on the Rights of Persons with Disabilities, 2008. (adopted 13 December 2006, entered into force 3 May 2008) UNTS 2515 art 12 MLA (Modern Language Assoc.).

Van den Hoven van Genderen, R. 2018. Legal personhood in the age of artificially intelligent robots. In Ugo Pagallo (ed.): Research Handbook on the Law on Artificial Intelligence. Cheltenham: Edward Elgar Publishing.

Whittemore, M. E. 2011. The Problem of Enforcing Nature's Rights under Ecuador's Constitution: Why the 2008 Environmental Amendments Have No Bite. Pacific Rim Law & Policy Journal. 20:3, 659–691.

Wise, S. M. 2010. Legal Personhood and the Nonhuman Rights Project. Animal Law Review, 17:1, 1–12.

Wood M.C. 2014. Nature's Trust. Environmental Law for a New Ecological Age. Cambridge: Cambridge University Press.

Wood, A. W. and O'Neill, O. 1998. Kant on Duties Regarding Nonrational Nature. Proceedings of the Aristotelian Society, Supplementary Volumes, 72:1, 189–228.

"What is intellectual property", WIPO Publications No. 450(E) ISBN 978-92-805-1555-0. Available at: <https://www.wipo.int/edocs/pubdocs/en/intproperty/450/wipo_pub_450.pdf>.

Young D. 2017. Whanganui tribes—Ancestors, Te Ara. *The Encyclopedia of New Zealand*, <http://www.TeAra.govt.nz/en/whanganui-tribes/page-1>, 27 April 2017.