

18. How to See the Invisible? The Recognition of the ‘Rights of Nature’ to Represent Future Generations

Silvia Bagni and Michele Carducci***

Abstract: *Is it possible to ignore Nature in discussions about future generations? Nature is the ontological and biophysical unit that marks life. Therefore, excluding Nature’s rights means not representing the future. This study proposes the recognition of the ‘rights of Nature’ as a hermeneutic tool to represent and protect the rights of future generations. The proposal is based on three elements. This generation must take great responsibility for safeguarding the ecological conditions that will ensure the stability of the One Earth System. The intertemporal integrity of natural processes is the determining variable of climate control. The qualification of the interdependence between Nature and future generations is coherent with the transformative changes recently invoked by the 2019 IPBES Global Assessment Report to achieve sustainability.****

1. Introduction

In legal terms, investigating the way in which the absent can be represented implies addressing two consequential research questions: first of all, to identify the ‘absent’, in opposition to the ‘present’; secondly, once the absent has been defined as a subject, to select the interests he/she can be entitled to.

As for the first research question, both the editors and the other authors of this book have been focussing on humans, individuals or people who are not here at this moment, so hypothetical legal subjects that have been identified as past or future generations. In this chapter, we will broaden the scope of the ‘absent’, in order to include also non-human legal subjects, which will be identified with the common name of ‘Nature’, in the ecological sense that will be further explained.

The second research question involves trying to list the specific interests and rights that the absents could claim, in order to make the process of

* Silvia Bagni is Associate Professor in Comparative Public Law at the University of Bologna.

** Michele Carducci is Full Professor of Comparative Constitutional Law at the University of Salento.

*** §§ 1 and 9 were written by both authors; §§ 7 and 8.1 by Silvia Bagni; all other §§ by Michele Carducci.

recognizing a 'present' legal representative for them more objective. In fact, recognizing absents' rights makes sense only if they could be revindicated by someone who is present. We will try to demonstrate that assumption, starting from what humans and non-humans have in common, that is the interdependent relationship that connects their existence. From an ecosystem perspective, there is one main and basic substantive right that must be guaranteed: the right to a safe and balanced One Earth System; that stands as a pre-requisite for all other rights of past, present and future generations, both humans and non-humans. This right is very peculiar with respect to other traditional substantive rights, because it is multidimensional. What does it mean? Usually, claiming a right consists in revindicating a space, tracing a border where an individual or a group can stand without interference from the outside. So, we could say that rights have a spatial dimension: they could be geometrically represented within the space. As for the right to a safe and balanced One Earth System, we will try to show that it is built both on spatial and temporal coordinates. First of all, it represents the common space where every other claim can be presented.¹ This means that it is an inclusive space, which is also a relational space, where every single entity is somehow connected to the others. In addition, these connections are not merely instantaneous, but persist in time through feedback loop mechanisms, bridging past, present and future. The temporal dimension, which we will refer to as 'natural time', is the fundamental characteristic of this relation.

Conceiving such a right is the epistemological consequence of a holistic and multi-disciplinary approach to life on Earth, that requires an effort on the part of legal scholars in order to rethink traditional legal concepts and adapt them to a broader reality. This new legal paradigm has been theoretically discussed by a minority group of legal scholars since more than a decade² and has become a normative reality since the adoption of

1 Like relational values, it is everywhere, see Kai MA Chan and others, 'Why Protect Nature? Rethinking Values and the Environment' (2016) 113(6) Pnas 1462.

2 Academic literature on rights of Nature is now very wide. The first attempts at theorization were the seminal article by Christopher D Stone, 'Should Trees Have Standing? Towards Legal Rights for Natural Objects' (1972) 45 Southern California Law Review 450 and the works of Thomas Berry <<https://thomasberry.org/category/publications/>> accessed 7 July 2023. Publications on the subject matter have flourished in the last decades. The reader can find a vast bibliography in the following two reports: Michele Carducci and others, *Towards an EU Charter of the Fundamental Rights of Nature* (EESC 2020) <<https://perma.cc/FM22-327Q>>; Jan Darpö, *Can Nature Get It*

the 2008 Ecuadorian Constitution, which incorporated the rights of Nature and paved the way for a Copernican revolution in law.

In this chapter, we will try to explain its theoretical basis, rooted in ecological concepts, and we will also attempt to draft the legal fundamental principles that derive from it. In § 2, we focus on the definition of the ‘absent’, supporting the need to widen its scope, including also non-humans and natural relations, so advocating for the use of ‘Nature’ as a comprehensive expression. In § 3, we will concentrate on the temporal dimension that connect past, present and future generations as a whole subject. In § 4, we analyse how the relations between nature, human actions and climate have been regulated thus far, in particular through the UN Framework Convention on Climate Change (UNFCCC). In § 5, we move to the identification of the subjective rights of the absent, pinpointing the need to guarantee a safe and balanced One Earth System. In § 6, starting from the bias of Western culture about a holistic concept of Nature, we introduce the idea of ‘sympoiesis’, a heuristic that means ‘co-production’ and is useful to understand why, in the ‘rights of Nature’ approach, nature is a subject, like humans. In § 7 we advocate for the adaptation of the environmental legal system to the natural laws that govern the Earth System. This requires, on the one hand, the formulation of a new *Grundnorm* and different set of conflict resolution rules; on the other, the implementation of an ecological analysis of law by enforcers and decision-makers; a multidisciplinary attitude to the formation of institutional bodies; an update in democratic processes. In § 8 we introduce the relational approach to law as a methodology that can be applied to reconcile the concept of ‘right’ with the sympoietic heuristics we have described in § 6. The article ends with some concluding remarks on the challenges that this approach implies with respect to Western legal dogmas about right-holders.

Right? A Study on Rights of Nature in the European Context (Policy Department for Citizens’ Rights and Constitutional Affairs Directorate-General for Internal Policies 2021) <<https://perma.cc/RQ9Z-WS68>>. See also the monographic issue: (2022) 13(1) *Revista Catalana de Dret Ambiental*. As for the Earth System Law, the main reference is Luis J Kotzé, ‘Earth System Law for the Anthropocene’ (2019) 11(23) *Sustainability* 6796 <<https://perma.cc/F7V7-X3MX>>; Louis J Kotzé and others, ‘Earth System Law: Exploring New Frontiers in Legal Science’ (2022) 11 *Earth System Governance* 1 <<https://doi.org/10.1016/j.esg.2021.100126>> accessed 7 July 2023. See also Timothy Cadman, Margot Hurlbert and Andrea C Simonelli (eds), *Earth System Law: Standing on the Precipice of the Anthropocene* (Routledge 2022).

2. Step One: Defining the Absent in Broader Terms

Our contemporary condition is characterised by two unprecedented features in legal terms:

- on the one hand, the fusion of human destiny with the non-human destiny of the planet (the thermodynamic equilibrium of the climate system on which our future depends);³
- on the other, the irreversible biophysical and spatial disconnection of human beings from the climate system on which they depend.⁴

In the Anthropocene, the Cartesian dualism between nature and society has broken down, resulting in a deep intertwining of the fates of nature and humankind.⁵ However, this plot is paradoxical. We no longer consider Nature to be a factor hostile to our plans of development, but we define what nature is or must be (natural capital, ecosystem service, asset, resource, subject). We continue to regard nature as an ‘external object’, even though it has been ‘manipulated’ by our definitions and classifications. Today, the climate and environmental crisis requires us to rethink this paradox and build a different narrative and regulatory relationship with nature.

In the online version of the Oxford Dictionary, nature is defined as follows: ‘all the plants, animals and things that exist in the universe that are not made by people’. This definition creates a clear opposition between humanity and nature, which seems to recall Renaissance philosophical ideas about human domination over nature, and that has been refuted by ecology and the Earth sciences. In contrast, the definition of ‘environment’ that the Oxford Dictionary offers is more inclusive, considering humans and non-humans on the same level: ‘the natural world in which people, animals and plants live’. From a scientific point of view, the environment is part of a natural ecosystem, the space in which countless relationships of mutual interdependence between biotic and abiotic elements, as well as the exchange of energy and matter, produce stability in the life of our planet. So, by using the expression ‘rights of Nature’ we will refer to this ecological

3 John Barry, Arthur PJ Mol and Anthony R Zito, ‘Climate Change Ethics, Rights, and Policies: An Introduction’ (2013) 22(3) *Environmental Politics* 361.

4 Christian Dörninger and others, ‘Assessing Sustainable Biophysical Human–nature Connectedness at Regional Scales’ (2017) 12 *Environmental Research Letters*.

5 Eva Löwbrand and others, ‘Who Speaks for the Future of Earth? How Critical Social Science can Extend the Conversation on the Anthropocene’ (2015) 32 *Global Environmental Change* 211.

definition. The international community has been aware of this relational concept of nature for some time. The Preamble of the World Charter for Nature, proclaimed by the United Nations (UN) General Assembly in 1982, states that ‘mankind is a part of nature and life depends on the uninterrupted functioning of natural systems’ and that ‘civilization is rooted in nature’. Moreover, the adoption of the Charter was justified in the interests of present and future generations. Unfortunately, the Charter has no binding force, and this holistic idea of nature very soon gave way to the concept of sustainable development.

Our approach finds some correspondence in another soft law document, the Universal Declaration of Rights of Mother Earth, approved in Cochabamba by the World People’s Conference on Climate Change and the Rights of Mother Earth in 2010.⁶ The preamble states that ‘we are all part of Mother Earth, an indivisible, living community of interrelated and interdependent beings with a common destiny’. As humans are a constitutive element of natural ecosystems and, ultimately, of the Earth System (ES), the concept of ‘rights of Nature’ is also comprehensive of human interests. As we will see, the recognition of ‘rights of Nature’ is relational, meaning that the focus is on the protection of the relationship, and the harmony and balance of all nature’s components.

The Western idea of separation between humans and nature is the consequence of our disconnection from the climate system. As we know, humans are biophysically connected to the biosphere through the flows of materials and energy appropriated from ecosystems. While this connection is fundamental for human well-being, modern societies have disconnected themselves from the natural productivity of their immediate regional environment. This disconnection operates through two historical processes. The first occurred through the use of energy inputs from outside the biosphere (non-renewable minerals, such as fossil fuels, metals and other minerals) and caused the ‘biospheric’ human-nature disconnection. The second occurred with the ‘spatial’ disconnection caused by international trade, which resulted in the import and export of biomass products and mineral resources from different ecosystems. We therefore live in an era where the destiny of humanity is fused with the destiny of the climate system, while humanity lives ‘disconnected’ from it. The challenge of the future is to reconstruct a common space-time between humanity and nature. In this

6 Declaración Universal de los Derechos de la Madre Tierra <www.rio20.net> accessed 7 July 2023.

perspective, the discourse on the rights of nature has also become central to the debate on future generations. In fact, attributing legal subjectivity to nature means recognising legal value to the rules of functioning of natural systems in their intertemporal and thus intergenerational perspective.

3. 'Natural Time' as the Key Dimension for Understanding the Absent as Nature

As we have clarified that the 'rights of Nature' approach is relational and includes the interests of humanity, we can now consider the projection of this relationality into the fourth dimension, that of time. This book looks at past and future generations as the absent and investigates how they can be represented. As already mentioned, the recognition of the rights of nature allows us to consider the importance of the different time scales of ecosystems and the entire climate system. Intertemporality is a determining factor for the existence of all forms of life, including human life. Consequently, respecting the rights of nature also means representing the intergenerational dimension of human rights and responsibilities.⁷ This perspective has always been accepted by indigenous peoples, who consider themselves part of the natural system and understand life as relation, and time as non-linear, so that 'generations', past and future, are always present at the same moment (in the cult of their ancestors, in the propitiatory rituals for the harvest, in the passage of seasonal celebrations...). The flux of time in the natural scale produces the fading of boundaries between past, present and future generations.

On the contrary, in the Western legal tradition, humans 'have' time, as an object of possession (so much so that we say 'time is money'). In the chthonic legal tradition, humans 'are' in the flux of time. Quite paradoxically, this 'to have-to be' opposition with respect to time has long been accepted by the Western system of scientific knowledge: for instance, Odum ironically stated that we all know we are born and will die, and therefore that we 'are' before we even 'have', but our society denies this ontology, fostering the illusion that we can 'grow' forever by accumulation. In physics, the epistemological framework changed with the shift from Newtonian physics to thermodynamics, with the discovery of entropy. Instead, the Western legal paradigm simply ignores all these scientific findings.

7 Drew Purves and others, 'Time to Model all Life on Earth' (2013) 493 *Nature* 295.

As all current global environmental law is based on a different anthropocentric paradigm, to give way to the nature's rights approach, legal scholars have been focussing on the issue of attributing legal personhood and standing to nature. Obviously, as should be clear from what we have said up to now and from what we will try to explain further in the following paragraphs, the recognition of the 'rights of Nature' is wider in scope.

4. Current International Regulation on Climate Change: Nature as a Stone Guest

International regulation on climate change offers some legal basis to the rights of Nature approach that we have presented.

Article 1 of the UNFCCC reproduces definitions of biophysical and earth sciences precisely on the complex temporal relationship between spheres of the climate system and human action. Article 2 recognises that dangerous human interference affects ecosystems and their timing, also compromising human interests, starting with food. Ultimately, the Convention qualifies the problematic nature of the temporal relationship between human action and nature.

Secondly, the Framework Convention bases its regulations on the assumption that human action has made the climate system 'unstable'. For this reason, in Article 2, it identifies the objective of 'stabilising' the entire climate system to exclude 'dangerous anthropogenic interference with the climate system'. This means adapting the legal rules of human behaviour to the timescales of the climate system, i.e., the 'natural' timescales of the ES, governed by thermodynamic and biophysical laws. It is no coincidence that the Convention adds this clarification again in Article 2: the stabilisation of the entire climate system 'should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner'.

It is important to note that the entire Framework Convention on Climate Change combines the consideration of the timing of the climate system with the protection of the interests of present and future generations.

In this perspective, the 'rights' of future generations focus not only on their social or political content, but on the permanence over time of the natural cycles of functioning and adaptation of all spheres of the climate system, without which human life itself cannot remain stable.

5. Step Two: Identifying the Subjective Rights of the Absent

The expression 'subjective rights' can have different meanings. Let us try, for example, to use the so-called 'Hohfeldian' scheme, developed by the American jurist Wesley Newcomb Hohfeld,⁸ which is still considered valid today.⁹ According to Hohfeld, discourses formulated in terms of rights always refer to four distinct elementary legal positions, defined as: claim, privilege, power, immunity. Where does nature as 'subject' fit into this classification? Apparently, it only fits into the 'claim', i.e., the fact that someone is obliged to behave actively, or by omission, towards the holder of the claim. The other elementary legal positions of the subjective right presuppose a capacity for action which nature, as such, has neither in terms of 'privilege', nor in terms of 'power', nor in terms of 'immunity'. However, if we instead consider the time factor in the thermodynamic and biophysical flow of the climate system, we discover that nature has not only 'claims', but also 'powers'. In the 'Hohfeldian' scheme, power is the possibility, on the part of its holder, to modify the legal position of others, or even one's own, so that the correlative legal position of power is subjection, and the inability of others to prevent it as its negation. In the field of the laws of thermodynamics and biophysics, this is exactly how it is: the temporal dynamics of nature prevail over human laws and we humans are incapable of preventing it. So, paraphrasing the well-known song by Patty Smith, 'Nature has the power'.

Ultimately, there is a correspondence between respect for the rights of nature as power and the representation of the rights of future generations. If nature is respected in its times of functioning within the climate system, the rights of human beings are guaranteed not only in the present but also in the future. By subjectivizing nature, it is possible to give voice and visibility to future generations.

This close correlation between times of nature and future human life has become evident with the climate emergency. The formula developed by Lenton, Rockström *et al*¹⁰ summarizes the concept: $E = R \times U$. The emergency exists (E) because the risks of degeneration of the entire climate

8 Wesley Newcomb Hohfeld, 'Some Fundamental Legal Conceptions as Applied in Judicial Reasoning' (1913) 23(1) The Yale Law Journal 16.

9 Herbert LA Hart, 'Are there any Natural Rights?' (1955) 64(2) The Philosophical Review 175.

10 Timothy M Lenton and others, 'Climate Tipping Points – Too Risky to bet Against' (2019–2020) 575 Nature 592.

system (R) increase over time. The time of the climate system has become the factor of urgency (U) to which human action must adapt to protect its future. Humans, to ensure their future, must protect nature within its times. So, the maintenance of a safe and balanced One Earth System is the precondition of any other right for present and future generations and the principle claim in representing the absent, as we have defined it above. However, the rights of Nature approach, that would be implied by the application of the ecosystemic principles to the legal paradigm, would drive major institutional and systemic changes to the legal system, that we will try to illustrate in the following paragraphs.

6. *Sympoietic Heuristics and the Legal Status of Nature as a Subject*

The intergenerational and interspatial dimension of the rights of nature bring with her the need to experiment with new ‘legal approaches’ to natural and social phenomena. As a matter of fact, urgency for a shift in the legal paradigm can be perceived also in numerous international documents. According to UN Resolution A/69/322 of 18 August 2014, these approaches should draw ‘from the holistic scientific knowledge provided by earth system science to develop laws and policies that better manage human behaviour in light of the interconnections between people and nature’.¹¹ The Paris Climate Agreement, in Article 6 no. 8, also suggests holistic approaches. More recently, even the Human Development Report 2020 has recognized that long-term sustainability should involve more than meeting quantitative targets of the reduction of carbon dioxide emissions or of biodiversity loss: ‘We need to aim for transformative changes in how societies relate to the biosphere [...]. The goals of sustainable human development must be rooted in integrated, transdisciplinary understandings of the connections of societies in the biosphere’.¹²

Moreover, holistic, interactional and systems-oriented ontologies are inherent in many indigenous cosmologies that have long preceded the emergence of systemic approaches in modern social and natural sciences.¹³ This

11 UN General Assembly, Resolution A/69/322 of 18 August 2014, para. 50.

12 Human Development Report 2020 (UNDP 2020) 98.

13 Iván Dario Vargas Roncancio, ‘Plants and the Law: Vegetal Ontologies and the Rights of Nature. A Perspective from Latin America (2017) 43(1) Australian Feminist Law Journal 67; Iván Dario Vargas Roncancio, *The Legal Lives of Forests: Law and the*

also explains the link between the rights of nature and the question of the recognition of indigenous rights.

It is true that a systems-based and complex approach to earth sciences has emerged in the Western tradition, especially when oppositions to mechanistic and Newtonian views of natural phenomena began to become prominent. However, Western thought has privileged a vision of complexity, as a product of exclusively social and anthropocentric processes, within which law has become an instrument for governance, indifferent to the complexity of nature. Therefore, the Western legal tradition has not elaborated the 'sympoietic' perspective of indigenous cosmogonies. 'Sympoiesis' is a heuristic of the whole ES. Heuristics provide essential tools for understanding living systems, their characteristics and their behaviour. However, 'autopoietic' heuristics are very different from 'sympoietic'. The term 'sympoiesis' was created by the environmental scientist Dempster¹⁴ to argue, in the light of ecosystem studies, that complexity consists of a collective production of actions and feedbacks that have neither spatial nor temporal boundaries that can be controlled by a single subject. In 'sympoiesis', there is no 'subject' and no 'object'... After all, the term 'sympoiesis' derives from Greek and means, 'doing together'. 'Doing together' does not mean 'inter-acting' but 'co-acting', in a real 'sybiogenesis' of creation of matter and energy.¹⁵ In 'sympoiesis', everyone is a 'subject' that produces consequences on others and therefore relationships that can also be governed by law.

The autopoietic perspective imagines a process of 'self-regulation' of a plurality of different elements, some of which are 'created' by human action, such as law, and therefore remain separate from the 'natural' ones. In this way, human 'self-regulation' and natural 'self-regulation' are not framed as a single system but as two different 'entities'. Consequently, complexity would operate as a plurality of systems with three fundamental characteristics: they are self-reproducing in an independent and closed manner (eg, law produces law, economy produces economy, etc); they have a self-defined and autonomous content (eg, law is not the economy, the economy is not society, society is not the family, etc); they have different functioning mechanisms (eg, law functions differently from the economy, the economy functions differently from society, etc). These allow each system to repro-

other-than-human in the Andes-Amazon, Colombia (An Anthropological and Legal Theory Approach) (PhD thesis, McGill University 2021).

14 M Beth and L Dempster, *A Self-Organizing Systems Perspective on Planning for Sustainability* (Master Thesis, University of Waterloo 1998).

15 Lynn Margulis, *Symbiotic Planet: A New Look at Evolution* (Basic Books 1998).

duce and control itself independently of the others. In practice, autopoietic heuristics totally ignore thermodynamics and the biophysical fact that everything is matter and energy, regardless of the living 'system' considered (legal, economic, social, human, etc).

On the other hand, a 'sympoietic' heuristic interprets complexity as an integrated ecosystem of non-separable subjects, all composed of matter and energy, just like the climate system. Just as the climate system has no boundaries because it involves the entire ES, so the idea of non-separability of human matter, energy and 'nature' suggests that there are no boundaries within the climate system. With this heuristic, there is no contraposition between subjects and objects. There is a sharing of biophysical conditions, which affect all subjects, human and non-human. Biophysical protection concerns everyone because everyone is 'matter' and 'energy' in the climate system. A 'biophysical' law cannot disregard this 'sympoiesis'. In this perspective, we can understand why the recognition of the rights of nature does not produce the invention of a new subject as opposed to the human subject. Instead, it is a cultural and legal approach that reveals the common biophysical conditions of matter and energy between humans and non-humans.

In practice, by recognising the rights of nature, we recognise the 'sympoietic' heuristics of the climate system. The rights of nature are the 'magnifying glass' of this heuristic. Within the climate system, all subjects contribute to its dynamics. Nevertheless, not all actors play the same role.¹⁶ Once again, the UNFCCC reminds us of this difference in its Preamble and Article 2. Only humans have produced 'dangerous' interference in the climate system, not other actors. Then humans must re-establish a responsible synergy with the other actors in the system, eliminating 'dangerous interference'. Human beings have only one way to achieve this 'responsible symmetry': re-establishing the connection of their actions with the times of nature, that is, of the different spheres of the climate system.

16 Marie-Catherine Petersmann, 'Sympoietic Thinking and Earth System Law: The Earth, its Subjects and the Law' (2021) 9 *Earth System Governance* 1 <<https://www.sciencedirect.com/science/article/pii/S2589811621000185>> accessed 21 July 2023.

7. *The Relational Approach to the Law as a Methodology to Reconcile the Concept of 'Right' with Sympoietic Heuristics*

The sympoietic heuristics shows that the stability of relations of interdependence and co-creation among individuals, species, communities and ecosystems should be the main goal of policies and rules. So 'relation' must shift from the periphery of the law to the centre of its institutional tools.

However, from a legal point of view, this goal is difficult to reach with existing legal instruments, because the concept of 'right' has been defined in terms of individual or collective 'claims' that clash with the opposing claims of other subjects. So, the concept of 'rights' generates an adversarial and confrontational system of dispute resolution, where (usually) one party wins and the other succumbs. As stated in the European Economic and Social Committee Report *Towards an EU Charter of the Fundamental Rights of Nature. Study* 'We also need to reframe rights from adversarial to synergistic, moving from "rights" to "right relationships", a "right relationship" being one that supports the wellbeing of the whole'.¹⁷

So, how can we legally protect the relationship between the parties instead of focusing only on their individual claims? To answer the question, we will try to analyse different academic contributions to the idea of a 'relational approach to law'. Even if the concept has mainly been applied to solve intercultural conflicts between humans, its premises can offer meaningful insights into the process of shifting to an ecological legal paradigm.

In the introduction to her seminal book *Law's Relations: a Relational Theory of Self, Autonomy, and Law*, Jennifer Nedelsky hopes that environmentalists will be among her readers because, as she stresses, 'The very concept of ecology is relational'.¹⁸ Meeting those expectations, her arguments will be applied to our proposal, as a powerful step in the direction of a re-orientation in how we shape and understand our world. By re-defining the self from a relational perspective, she supports a new concept of law and a new language for rights¹⁹: 'A relational analysis provides a better framework for identifying what is really at stake in difficult cases and for

17 Carducci (n 2) 10.

18 Jennifer Nedelsky, *Law's Relations: a Relational Theory of Self, Autonomy, and Law* (OUP 2011) 12.

19 'My point throughout is that law needs an alternative conceptual framework to do its work optimally, and new concepts need to be given life in the law' (Dorninger and others (n 4)).

making judgments about the competing interpretations of rights involved [...] Both law and rights will then be understood in terms of the relations they structure – and how those relations can foster core values, such as autonomy'.²⁰ In fact, the author tries to defend a relational concept of autonomy, that generates from the relationships in which the self is always re-created.²¹

Nedelsky also takes into consideration the consequences that relational autonomy project onto the paradigm of equality, with respect to non-human entities. Even if, for her purposes, she maintains the idea of the inherent equality among humans as the basis of her discourse, she also underlines that the relational approach would foster a redefinition of our relationship with nature, on a stance of mutual respect, concern, care, interdependence and responsibility. In fact, her analysis of the situation of conflict of values in difficult cases is really straightforward. The relational approach suggests that, instead of looking at which value stands higher in a hierarchy, we should change the question, and look at an alternative method of conflict resolution, which could correctly evaluate the relationship existing among all the actors, so that a choice between two evils (the complete sacrifice of one value) is no longer the only option.²²

She also advocates a relational approach to rights, which means that their enforcement must be considered in terms of 'the ways rights structure relationships'.²³ A legal controversy is usually seen by lawyers as a conflict of rights. Conceiving rights in a relational perspective would imply considering that there is a mutual relationship between the rights' bearers, which makes them also reciprocally responsible towards one another.²⁴ Responsibility, accountability, sense of care, are the dimensions missing in the liberal theory of rights. Rights rhetoric appears to be universally accepted

20 *ibid.*

21 'Autonomy is made possible by constructive relationships – including intimate, cultural, institutional, national, global, and ecological forms of relationship – all of which interact' (*ibid.*, 118).

22 'Finally, inspired by Amy, I realized that the contribution of my relational approach to this problem of inclusion could not come from figuring out a rank ordering among different life-forms. Amy kept trying to tell her interviewer that he was asking the wrong question (while, with increasing impatience, he kept trying to get her to answer it). The most important ethical question is not how to choose between two bad options, but how to change the situation (often by restructuring the relations) so that those are no longer the only options' (*ibid.*, 196).

23 *ibid.*, 235.

24 *ibid.*, 248.

and applied, even in an undemocratic context. The relational approach can be used to enhance some core values, such as autonomy and equality, as well as producing some new values, such as care.²⁵

In her studies about Singapore's relational constitutionalism, Li-ann Thio considers the Singapore experience as a valuable and original product of a different cultural and legal sensitivity, based on non-liberal views: 'to be is to exist in relation to other beings and relationalism prioritises the longevity or durability of mutually dependent relationships, rather than treating relationships as discrete short-term transactions'.²⁶

Even if the main objective of relational constitutionalism in Singapore is to manage inter-group conflicts and assure religious harmony, its cultural basis and the methods followed to reach its goal can offer food for thought on how to shape the ecological legal paradigm: 'The vision of the individual within a relational framework is not the vision of an atomistic rational being asserting rights against the state, which many liberal theorists favour. Instead, individuals are situated in communities, shaped and constituted by the network of relationships they interact with and are fundamentally connected to'.²⁷

Following Thio's arguments, we could consider the stability of the ES as the common value at the basis of a sustainable and harmonic society, where people are aware of their vulnerability and interdependency with respect to other non-human lives, and the matter and energy we co-produce by our interactions. This idea corresponds to the interpretation Silvia Bagni gave of the constitutional architecture of the State designed by the new Constitutions of Ecuador and Bolivia in 2008 and 2009, that she called the Caring State. In fact, this concept emerged as attached to experiences that were incorporating the Rights of Nature into the legal system, both at the constitutional and legislative level. The Caring State is based on two main pillars: environmental and social justice. These goals are to be understood in the light of what we have called in this article a 'sympoietic' perspective. In fact, 'environmental justice' is intended in a broader sense, as opposed to the international idea of the 'environment'.

A slightly different version of relational constitutionalism has been reconceptualised by Elizabeth Macpherson, where she defines Australasian

25 *ibid.*, 82.

26 Li-ann Thio, 'Singapore Relational Constitutionalism: the "Living Institution" and the Project of Religious Harmony' (2019) *Singapore Journal of Legal Studies* 204, 233.

27 *ibid.*, 206–207.

Environmental Constitutionalism as Relational Legal Pluralism.²⁸ She has studied the cases of recognition of ecosystem rights in New Zealand and Australia, and she considers that they represent an innovation in the context of environmental constitutionalism, specifically because of their relational function. Macpherson indicates that Australasian Environmental Constitutionalism is indeed an example of the ‘relational turn’ in socio-legal theory, which departs from static notions of law to a focus on the relational processes of dialogue and negotiation in plural, multicultural legal settings’.²⁹

Finally, a different legal paradigm based on the principle of ‘relationality’ comes from indigenous jurisprudence and political movements in the Global South. Comparing Andean indigenous perspectives with the Western legal tradition, Maria Elena Attard Bellido imagines a dialogue on legal pluralism based on a pluri-national, communitarian and decolonized perspective.³⁰ This alternative jurisprudence rejects the binary code of legal disputes in favour of solutions that defend harmony and sustain ‘*vivir bien*’. Within this understanding of the law, jurists are called on to ‘feel the reality’, before ‘knowing’ or ‘thinking’ it³¹. Knowledge is the result of collective experiences and practices, transmitted through generations. The author proposes applying to the analysis of legal conflicts the methodology of the *chakana*, which represents the Andean Cosmovision. The *chakana*, as an intercultural interpretative tool, invites the lawyer to consider the legal facts from four dimensions: being (*ser*), knowing (*saber*), doing (*hacer*) and power (*poder*). This multidimensional approach (*sentipensar*, ‘thinking with our feelings’) guarantees the harmony of humankind with its environment and aims at the realization of *vivir bien*.

We are sure that a relational approach to law could be seen by many as a dangerous erosion of individual rights and freedoms; by others it could

28 Elizabeth Macpherson, ‘Ecosystem Rights and the Anthropocene in Australia and Aotearoa New Zealand’ in Domenico Amirante and Silvia Bagni (eds), *Environmental Constitutionalism in the Anthropocene. Values, Principles and Actions* (Routledge 2022) 168.

29 *ibid.*, 171.

30 Maria Elena Attard Bellido, ‘Entre la diosa Themis y Mama Ocllo: la propuesta de argumentación jurídica plural desde la filosofía intercultural andina de la Chakana’ (2019) 50 *Diálogo de Saberes* 79.

31 ‘Desde esta ética aymara, el runa/jaqi — el ser humano como parte de la naturaleza— siente la realidad, más que conocerla o pensarla’ (Josef Estermann 2009, cited by Attard Bellido (n 30) 93).

seem utopic. As for the first critique, we have tried to explain with the concept of 'sympoiesis' and in the next paragraph with the new hierarchy of conflict resolution criteria, that the individual is not erased by our proposal, but empowered by its relational dimension, which can foster a more inclusive and respectful community. Relationality applied to human-human relations integrates the dogmatic structure of rights, trying not only to solve a conflict, but also to advance workable solutions to complex social problems, encouraging social transformation.³²

As for the second critique, we are strongly convinced that our mental thought structures produce a strong impact on how we behave. Additionally, our language, as a product of our thinking, shapes our behaviour. So, we absolutely need to create a 'habit of relational thinking'. This could generate a shift in our epistemological paradigm, from a liberal to a relational/ecological one, to request from humanity a real change in the pattern of consumption and exploitation of our planet and our fellows. As was asserted in the 2020/2021 UN University Interconnected Disaster Risk Report 'changing the underlying systems that create disastrous situations can only begin when individuals recognize their part in the larger, whole iceberg, rather than just the tip'.³³

8. Adapting Legal Systems to the Recognition of the 'Rights of Nature'

8.1. The Grundnorm of the Integrity of the ES and new Conflict Resolution Rules

From the above discussion, it is clear that legal science should be shaped by the new knowledge emerging from the ES sciences; but also, from the ancestral knowledge transmitted through centuries by the chthonic legal tradition that still survives within indigenous peoples.³⁴ In fact, indigenous customary law is based on natural laws and on principles that aim to maintain a harmony among all the members of the community, humans and non-humans.³⁵

32 Nedelsky (n 18) 342.

33 UN University Interconnected Disaster Risk Report 2020/2021, 88.

34 Nicole Redvers and others, 'The Determinants of Planetary Health' (2021) 5 *The Lancet* e156.

35 For Latin American, African and Australasian indigenous traditions see respectively Ramiro Ávila Santamaría, 'Rights of Nature vs. Human Rights? An Urgent Shift of

The sympoietic heuristics described above require legal scholars to re-interpret the hierarchy of values at the basis of sixteenth century social contract philosophy, from which constitutionalism derived. In that period, the abundance of natural resources, capitalism in its early stages, and ignorance about the homeostatic mechanisms of the ES represented the perfect scenario for human domination of the planet.³⁶ The impact of the industrial revolution on the ecosystem and climate was at that time unimaginable. Consequently, the legal status of natural elements as objects and resources was coherent with the social, cultural and economic premises. The stability of the Holocene era was taken for granted.

The situation has dramatically changed, and the law should in turn also change. The fundamental goal of a constitutional system should be the preservation of the integrity of the Earth System (see above, § 5).³⁷

Kim and Bosselmann propose considering the protection and restoration of the integrity of the Earth's life-support system 'as a potential Grundnorm or goal of international environmental law'.³⁸ Nature as 'Grundnorm' could guide the evolution of global constitutionalism³⁹ as a set of rules on the permanence of rights over time (in Cooter's 'strategic' meaning of Constitution⁴⁰). As Schmidt notes, the protection of the ES is a goal, from which to extrapolate a new *Grundnorm*, as a criterion of the validity of the system's sources of production.⁴¹ The validity of norms no longer coincides with compliance with internationally assumed constraints (as in the Kelsenian *Stufenbau*), but with their conformity to the 'natural' rules that guarantee the stability of the ES.⁴² So, when conflict of rules occur, norms' legitimacy

Paradigms' in Amirante and Bagni (n28), Kyriaki Topidi, 'Ubuntu as a Normative Value in the New Environmental World Order' in Amirante and Bagni (n28) and Macpherson (n28).

36 Fritjof Capra and Ugo Mattei, *The Ecology of Law. Toward a Legal System in Tune with Nature and the Community* (Berrett-Koehler 2015).

37 Quirino Camerlengo, *Natura e potere. Una rilettura dei processi di legittimazione politica* (Mimesis 2020).

38 Rakhyun E Kim and Klaus Bosselmann, 'International environmental law in the Anthropocene: Towards a purposive system of multilateral environmental agreements' (2013) 2 *Transnational Environmental Law* 285, 305.

39 Michele Carducci and Lidia Patricia Castillo Amaya, 'Nature as "Grundnorm" of global constitutionalism: contributions from the Global South' (2016) 12(2) *Revista Brasileira de Direito* 1.

40 Robert D Cooter, *The Strategic Constitution* (Princeton University Press 2000).

41 Jeremy J Schmidt, 'The Moral Geography of the Earth System' (2019) 44 *Transactions of the Institute of British Geographers* 728.

42 Michele Carducci (n 2) 170 ff.

should first be measured, bearing in mind the tipping points that scientists have indicated with respect not only to climate stability, but to ES resilience, that is, the capacity of maintaining or recovering the equilibrium that allows life to prosper on our planet. Climate change is, in fact, one of the nine indicators of the Planetary Boundaries Framework, even if, together with biosphere integrity, both have been considered the two core indicators, through which the other boundaries operate.⁴³

Moreover, the same concept of 'right' could appear inappropriate. The ecosphere, the ecosystems and non-human species do not have any claims to make to the legislator. They simply exist and follow the intrinsic rules of survival in their DNA and the interdependency paths that evolution has forged. How humanity represents itself inside this framework, either as an insider or an outsider, does not depend on Nature's claims, but on our own cultural understanding.

This analysis is complemented by the concept of 'emergent property',⁴⁴ which means that each level gains some additional characteristics from the layers below. Following Odum, emergent properties do not correspond to the sum of the characters of all inferior unities but are the product of their interrelationships.⁴⁵ As already stated in § 3, all the players in the game of life have different roles, but a hierarchy among the layers remains, and generates increasing complexity in the organization of living and non-living matter. From a legal point of view, this hierarchy is relevant when applying dispute resolution criteria to legal conflicts.

The ecological *Grundnorm* we have recognized obliges us to prohibit any action or omission that affects the safe operating space for humanity⁴⁶ (identified by the planetary boundaries framework or by the overcoming of the tipping points of the ES). This means that the balance of the ES should always prevail over the other legal subjects' rights. This same rule

43 Will Steffen and others, 'Planetary Boundaries: Guiding Human Development on a Changing Planet' (2015) 347 (6223) *Science* 736.

44 George W Salt, 'A Comment on the Use of the Term Emergent Property' (1972) 113 (1) *The American Naturalist* 145; see also Rom Harré, *The Philosophies of Science* (OUP 1985).

45 Eugene P Odum and Gary W Barrett, *Fundamentals of Ecology* (5th edn, Thomson 2004) 8.

46 Johan Rockström and others, 'A Safe Operating Space for Humanity' (2009) 461 *Nature* 472; Paulo Magalhães, 'Common Home As a Legal Construction Based on Science' in Silvia Bagni (ed), *How to Govern the Ecosystem?* (Dipartimento di Scienze giuridiche 2018).

was included in art. 1, § 7 of the Universal Declaration of Rights of Mother Earth⁴⁷ and corresponds in legal terms to the application of the '*in dubio pro natura*' principle, where 'Nature' is holistically interpreted as the eco-sphere.

Many scientific reports and studies have denounced that we have already crossed the safe operating space for humanity, at least in the two core indicators of climate change and biological integrity. Consequently, the '*in dubio pro natura*' criterion must be declined in two sub-principles: '*in dubio pro clima*' and '*in dubio pro conservatione*'. The latter was already recognized by the CITES with respect to biodiversity and in principle 5 of the ecosystem approach endorsed by the COP of the Convention on Biological Diversity (UNEP/CBD/COP/5/23). Biodiversity is the engine of evolution on the planet. Moreover, we are still unable to understand all the complex relationships and feed-back loops deriving from the interaction of all the levels of organization of the ES, so the precautionary principle should aim to justify not only the preference assigned to the protection of species from extinction, but, in general, the preference of the solution that guarantees the highest rate of biodiversity, even when not at risk of extinction.

If ecosphere stability is not endangered, to determine which competing right must prevail, we have to look at the status of the legal subjects involved, following the hierarchy of the living and non-living components of the ecosphere. Ecosystem stability must prevail over species and individual rights; and species existence must prevail over individual rights.

Only when the previous conditions are satisfied, should a safeguard clause in favour of human rights apply. The common condition of the vulnerability of all individuals and species when faced with a planetary ecological disaster justifies a restriction of the 'pro-homine' principle. But from a 'sympoietic' perspective, even when only human interests are in conflict, dispute resolution principles must be applied, taking into consideration the fact that human actions are never ecologically neutral and always co-create relationships with other forms of matter and energy. For this reason, proportionality should become 'eco-proportionality' (proposed by Winter) and the defence of the 'essential core' of human rights must

47 '(7) The rights of each being are limited by the rights of other beings and any conflict between their rights must be resolved in a way that maintains the integrity, balance and health of Mother Earth' (Universal Declaration of Rights of Mother Earth, World People's Conference on Climate Change and the Rights of Mother Earth).

always try to reach a reasonable balance with Nature's rights and preserve the fundamental right to life of non-human subjects.

8.2. Introducing Science-Based Processes of Democratic Decision-Making and the Ecological Analysis of Law

In the previous sub-paragraph, we have defended that 'sympoietic' heuristics requires an important discussion of modern legal categories. Additionally, it requires a reorganisation of legal procedures and deliberative bodies. By way of example, judging bodies should become multidisciplinary with equal discussion rights: involving not only judges, but ecologists, geologists, physicists, and so on. Their function should be not merely advisory but should make it possible to promote the ecological analysis of law in terms of consideration of the intertemporal consequences of human action on natural systems. Moreover, the reasons for the acts should not be exclusively legal but also scientific. This approach would favour a new 'holistic' episteme of a non-autopoietic kind.

In addition, a multidisciplinary perspective would make it possible to know the facts in their biophysical dimension and not only with regard to human interests. It would not be a matter of entrusting decisions 'to' scientists, but of deciding 'with' scientists in a dimension of equal discussion (precisely through the right of concurrent or dissident decision). Scientific knowledge allows us to understand how nature works and what its times are compared to the times of human action. In this way, the democratic method would also evolve as a method of knowledge of the complexity of reality and of discussion of the interdependencies between times of nature and human times.

The interpretation and application of the law should take into account the acquisitions of thermodynamics and biophysics on the times of functioning of the different spheres of nature. In this perspective, an 'ecological analysis of law' becomes opportune. This means assessing the effectiveness of the legal rules with regard both to their effects on human expectations, as already provided for in the economic analysis of the law, with its postulate of efficiency, and to the processes generated on the climate system, in terms

of energy consumption (emergy and exergy) that conditions the determinant vectors of the emergency.⁴⁸

It is interesting to note that this perspective of the ecological analysis of law and policy seems to emerge also in the European context on two fronts. The first is the new double constraint of ‘do no significant harm’ (DNSH) and compliance with the ‘environmental objectives’ as common denominators of any economic activity (the double constraint was introduced by European Regulation no. 2020/852). The second is the affirmation of the ‘net-gain principle’ to give nature back more than it takes, established by the EU Biodiversity Strategy for 2030 (entitled ‘Bringing nature back into our lives’) and reiterated in other documents of the European Green Deal.

The principle of DNSH to the environmental objectives of the European Union implies the need not to irreversibly compromise the natural cycles of reproduction and equilibrium of the different spheres of the climate system.

The ‘net gain’ criterion suggests that economic action must not simply ‘compensate’ for any loss of biodiversity produced by its impacts, but, on the contrary, contribute to increasing biodiversity within the European Union.

9. Conclusion

In our research, we have proposed the ‘Rights of Nature’ approach as a legal paradigm justifying the representation of absent generations (past and future) through the juridification of the ‘invisible’, which we have indicated as nature in its twofold dimension, spatial and temporal. In fact, the ecological crisis we are facing can be tackled only if we recognize that the current timeline of human actions to combat climate change does not correspond to the temporal dimension of natural phenomena, such as the climate itself, or bio-geo-physical cycles, on which the stability of the ES depends. As human beings are part of the ES, they should live ‘reconnected’ with nature. This assumption produces many relevant consequences with respect to the issue of representing the absent. First of all, in the natural timescale, the borders between past, present and future generations fade. From an ecological point of view and accepting the integrity of the ES as a new *Grundnorm*, there are no qualitative differences, as far as the interests

48 Analisi ecologica del diritto <<https://www.analisiecologicadeldiritto.it>> accessed 7 July 2023.

of present and future generations are concerned. They converge on the same goal, and are interconnected and interdependent, not only intra- and inter-generation, but also intra- and inter-species.

So, theoretically speaking, the legal problem should no longer be one of representation, but of scientific knowledge, enabling us to choose the interests to be taken care of, having as a starting point the interconnectedness of all the components of the ES. As we have underlined in § 8.2, the processes of decision-making and enforcement of the law should be reshaped, giving voice and space to scientific findings. Responsible research and innovation should not only include ethical and methodological issues, but also ask itself 'how to care' in the definition of research topics⁴⁹. This same path has been followed by the IPBES (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services) in its last Global Assessment Report on Biodiversity and Ecosystem Services. The IPBES was created in 2012 to provide policy-makers, the private sector and society at large, with scientifically credible assessments on the state of knowledge on the planet's biodiversity. In its last Report, the IPBES adopted an intercultural and inclusive approach, merging for the first time ever, data coming from scientific literature and from indigenous and local knowledge and practices, as our own approach has tried to suggest.

However, the relevance we recognize to science should not be misunderstood. We do not support technocracy: we advocate responsible democratic methods of decision-making.⁵⁰ This is coherent with the sympoietic heuristics described in § 6, and implies, as we have tried to show in § 7, a rediscovery of the relational approach to law and the reincorporation of the ethics of care in politics.

If, in theory, the representation issue could be considered as resolved, in practice we do not expect that the paradigm shift we propose could happen rapidly. If we come back to the IPBES Report mentioned above, and we move to the possible solutions, it suggests that, considering the current status of the planet in term of biodiversity and ecosystem services, the objective of a sustainable use of nature can be reached only by implementing a 'fundamental system-wide reorganization across technological,

49 Ângela Guimarães Pereira and Andrea Saltelli, 'Post-normal Institutional Identities: Quality Assurance, Reflexivity and Ethos of Care' (2017) 91 *Futures* 53, 59.

50 Sergio Messina, *Eco-democrazia. Per una fondazione ecologica del diritto e della politica* (Orthotes 2019).

economic and social factors, including paradigms, goals and values'.⁵¹ In fact, the approaches for sustainability proposed in the Report⁵² correspond to a large extent to our own definition of the 'rights of Nature' approach. Specifically, in the legal field, from a sympoietic (co-creative) perspective, we have invited legal scholars to reshape the law on the basis of new ecological and relational values.⁵³

In the 'rights of Nature' approach, the representation issue is solved with the recognition of legal personhood and standing to natural elements, the implementation of new rules of conflict resolution, the incorporation of the ecological analysis of law and the creation of eco-democratic decision-making processes, as we have proposed in § 8.

Our approach to the research topic of representation of the absent has transformed the research question from a matter of procedure to a substantive question about the fundamental values on which our human society must be founded. Our hope is that this debate will attract more and more researchers, eventually involving the whole community.

51 IPBES, *Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services* (IPBES Secretariat 2019) 14.

52 Enabling integrative governance to ensure policy coherence and effectiveness; Promoting inclusive governance approaches through stakeholder engagement and the inclusion of indigenous peoples and local communities to ensure equity and participation; Practicing informed governance for nature and nature's contributions to people; Promoting adaptive governance and management (Global Assessment Report to achieve sustainability (IPBES 2019) 44).

53 Chan and others (n 1).

