REVISTA *ARGUMENTUM*

THE 'HARMONY WITH NATURE' PARADIGM IN BRAZIL

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ABSTRACT

This article analyzes a biocentric shift that is currently emerging within the Brazilian legal system, by inscribing it within the currently emerging global discourse on rights of Nature and ecological jurisprudence. The study is justified by the magnitude of the recent environmental disasters, occurring both in Brazil and in the world, which suggest the need for greater legal role awarded to Nature in order to engender greater environmental protection. The objective of this article is to clarify the biocentric paradigm of protection of the environment and verify the feasibility of its application within Brazilian law. In conclusion, it is noted that, although the biocentric view of rights of Nature gives greater prominence and effective protection to the environment, radical changes within the Brazilian legal system are necessary.
KEYWORDS: Biocentrism; Harmony with Nature; Rights of Nature, Ecological Jurisprudence.

INTRODUCTION

In 2015, the Municipality of São Paulo proposed the Amendment to the Organic Law[1] of the Municipality nº 04-00005/2015, in which it suggested to include a new provision (180A), 'considering that the members of nature have intrinsic rights to life and maintenance of their ecosystem processes, in interdependence with the dignified life of the citizens, with the aim of achieving sustainability in the city' (SÃO PAULO, 2015). Shortly thereafter, in 2017, the Municipality of Bonito, in the State of Pernambuco, amended its Organic Law to recognize the rights of Nature (PERNAMBUCO, 2020), and was soon followed, in 2018, by the Municipality of Paudalho, also in the State of Pernambuco, which, equally recognized Nature as a subject of rights (PERNAMBUCO, 2018).

From this brief overview, it seems that rights of Nature arguments are increasingly becoming commonplace in Brazil. In a parallel, but ultimately similar development, the Superior Court of Justice decided, in March 21, 2019, that non-human animals can be conceived of as subjects of law, making them the object of custody, not possession, by their human companions (Appeal nº 1.797.175-SP). Ingo Wolfgang Sarlet and Tiago Fensterseifer suggest that, through an ecological reading of the principle of the dignity of the human person (prompted by what is, in fact, an emergency in the face of an ecological crisis), this judgment challenges and ultimately dismantle a fundamentally Kantian anthropocentric paradigm (SARLET; FENSTERSEIFER, 2017, p. 62).

The ontological, epistemological, and ultimately normative, transformative potential of the emergence of a rights of Nature paradigm is profound and cannot be overstated. As mentioned above, such a proposal does more than rearranging the existing categories of legal subjectivity, or even rewriting its fundamental constituents, and rather challenges century-old assumptions about the role of humanity in the cosmos and the normative and legal protocols such assumptions have produced. Cast against the most recent and widely reported global environmental disasters, this challenge highlights the insufficiency of the mainstream discourse for the effective protection of the environment, as well as the quality of life of both current society and future generations.

[1] In Brazil, in addition to the Federal Constitution, States and Municipalities have a type of law similar to a "local constitution". Municipalities call this law the Organic Law.

This article is thus prompted by the (increasingly more widely shared) perception of the seriousness of environmental issues that affect global society today (both internationally and, more specifically, in Brazil), with its consequential quest for alternative solutions focused on a novel conceptualization of legal subjectivity that aims to include Nature within its fold. Many new proposals designed to offer an increased preservation of the environment through rights of Nature initiatives have already been embraced by several countries, while an overall ecocentric shift has been advocated by the United Nations through its Harmony with Nature programme. In contextualizing the Brazilian experience among those examples, this article aims to appraise and evaluate the evolution of rights of Nature considerations within Brazilian legislation, to analyze recent biocentric and ecocentric trends within Brazilian jurisprudence, and, finally, to reflect upon the adequacy of such an approach within the Brazilian legal system.

PART I – ECOLOGICAL JURISPRUDENCE RISING

While the right to development was internationally recognized as an inalienable human right through the Declaration on the Right to Development (UNITED NATIONS, 1986), the articulation of a *sustainable* development has been steadily increasing over the past few decades, through Brundtland Report (UNITED NATIONS, 1987), Rio 92 (UNITED NATIONS, 1992), Johannesburg Declaration on Sustainable Development (UNITED NATIONS, 2002), Rio + 20 (UNITED NATIONS, 2012) and Sustainable Development Summit (UNITED NATIONS, 2015). *Sustainability*, albeit often misused as a concept, reveals an underlying dissatisfaction with the ultimately anthropocentric and tautological cosmology embodied by the very idea of 'development', an idea that emerged relatively recently in human history. Heron José de Santana Gordilho suggests that the Modern Age, by instrumentalizing the meaning of things, placed man at the axiological centre of the moral universe, and thus, as a result, solidified the triumph of an anthropocentric ontological worldview accompanied by materialism and laicization, with a rejection of any spiritual value to be found in the cosmos itself and a consequent devaluation of different worldviews (GORDILHO, 2008, p. 23-25).

In contrast, in 1972, Professor Christopher Stone concluded a property law lecture at the University of Southern California with a rather provocative question: should *trees* have standing, he asked? While 'greeted … with [laughter and] uproar' (STONE, 2010, xiii), the question had been prompted by the proposed development, in the Southern Sierra Mountains,

of a resort that would have destroyed an extensive portion of the original old growth forest inhabiting the mountains. The attempt to block the development by the Sierra Club was, however, frustrated, in *Sierra Club v. Morton*, by the argument that, by not being directly damaged by the proposed development, the Sierra Club lacked standing. That notwithstanding, Stone argued, something – the old growth forest itself – *was* being damaged, and thus in need of immediate protection; such an argument convinced Justice Douglas who, in his dissenting opinion, suggested that, 'if standing were the barrier, why not designate … the wilderness area as the plaintiff "adversely affected"' (STONE, 2010, xiii).

It is impossible not to wonder as to what, within contemporary legal imagination, made the Sierra Mountains old growth forest legally *invisible* (or at least legally *irrelevant*). While it is inherently difficult to accurately identify the origin of an idea, it is undoubtable that the underpinning worldview of modern legal theoreticians and practitioners alike is directly linked to the very idea of "nature" as evolved within Mediterranean and European civilizations over the past two or three millennia. It is likely that a radical change occurred in the worldview of the first villagers and farmers, whose environment morphed from a holistic cosmological fabric within which the entirety of the cosmos was both enshrined and rigorously mapped to a wilderness to be replaced by agriculturally productive lands. However, it is in the earliest philosophical document that the roots of the modern conception of "nature" is clearly articulated.

In the writing of pre-Socratic philosophers, the quest for the definition of "nature" became synonymous with the quest for the understanding of "matter". Concerned with the question as to whether matter is a single substance capable of multiple expressions, or rather a collection of separate and ultimately independent components, Democritus's answer arguably is, to the present day, the most notable one, conceiving of "matter" (and thus, by extension of 'nature') as an interplay of distinct and ultimately separate units called "atoms". Democritus's view, of nature as a collection of ontologically independent material components, became the basis of modern science, leading to a worldview that Brian Swimme and Mary Evelyn Tucker define as "[d]eterministic materialism … a worldview that [has] three tenets: that all things in the universe [are] composed of tiny particles of matter; that these particles [are] purely material, without any degree of subjectivity, and that these particles [move] according to fixed, mathematical laws." (SWIMME; TUCKER, 2011, p. 103-104)

Such a view was further solidified, at the onset of the Modern Age, in the writings of Rene Descartes, who, informed by Judeo-Christian medieval metaphysics, argued that only humans possess a "mind", with all other 'things' being nothing more than "things", material collections of particles moving in a somewhat mechanical manner. Cartesian deterministic materialism, therefore, enshrined not only within natural but also within political philosophy the idea that only human could be conceived of as *subjects*, with everything else only being capable of being an ontological, political, and ultimately legal *object*: "for centuries scientists have attempted to explain the universe by means of physical laws expressed in mathematical equations. The universe was thought to consist of mechanisms within mechanisms." (SWIMME; TUCKER, 2011, p. 49)

Nature thus conceived became, in its inherent material "alienness", a mere collection of objects to be harnessed for the benefit of thinking humans, capable of reaching its full potential only when properly "developed", leading to the (hopefully unintended) consequences we observe today. "Dynamized by their technology and their dreams of material progress", Swimme and Tucker write, "modern humans transformed the planet into a bundle of resources. They produced food in quantities never seen in history, and consequently populations exploded." As a result, "feeding and housing these many humans … led to the depletion of the oceans, the degradation of the forests, and the loss of topsoil … The paradox of unintended consequences is now becoming evident. The oceans, the rivers, the atmosphere, and the soil have all been severely degraded by our actions". As Yuval Noah Harari suggests, the collective power of humans to shape the environment is now, due to its sheer contemporary magnitude, akin to a geological force (HARARI, 2014).

Such a transformative power, however, was harnessed from its ontological promise by specific legal structures. It is the normative and legal structures deployed by European colonial societies first, and then by the rest of the globalized world, that allowed natural landscapes to be reshaped in the manner we collectively observe today, according to conquering (and often colonial) ideas as discussed above. Nicole Graham suggested the term "lawscape" to describe the legal reshaping of the world, arguing that, due to contemporary human ubiquity, every landscape we collectively observe (and inhabit) today is the direct result of the interplay between law, property regimes and environmental ontologies (GRAHAM, 2011). In this sense, nature can only be conceived of as a collection of objects, in particular a collection of objects of other subjects' property rights.

If nature is just an *object* of rights, and if the *subjects* of such rights have absolute power over that which is the object of such rights, then, naturally, the environmental damage suffered by the Sierra Mountains old growth forest and decried by Stone in 1972 was indeed legally invisible. Stone's question was thus particularly provocative, as it recognised the profound interplay between normative structures and ecological alterations, and thus, in proposing to remove 'nature' from the category of legal *things*, or *objects*, and rather casting it as a legal *subject* in order to increase its legal protection, it allowed the modern legal world to imagine the natural world as an active participant within human legal proceedings.

Stone's proposed shift from an *anthropocentric* legal ontology to a *biocentric* or even *ecocentric* one, suggesting a much more cautious approach to our interaction (as a collective species) with the rest of nature, answered Rachel Carson's call who, in 1962, had written that "the earth's vegetation is part of a web of life in which there are intimate and essential relations between plants and the earth, between plants and other plants, between plants and animals. Sometimes we have no choice but to disturb these relationships, but we should do so thoughtfully, with full awareness that what we do may have consequences remote in time and place" (CARSON, 1962, p. 64). Gordilho further suggests a growing dissatisfaction, within the scientific community over the last few centuries, with the anthropocentric view articulated above:

> First, when Copernicus demonstrated that the earth was not the center of the universe, but only a small fragment of a vast cosmic system. Second, … Charles Darwin proved that the human species did not emerge ready, as the Bible says, and there is a common ancestor with the great primates. And finally, when Freud demonstrated human irrationality and that the ego is not lord within its own home, since most of our actions are unconscious (GORDILHO, 2008, p. 33)

Carson and Stone's proposals were further expressed, two decades later, by eco-theologian and self-described 'earth scholar' Father Thomas Berry first, and South African environmental lawyer Cormac Cullinan shortly after. Underpinned by deep ecological perspectives (Arne Naess and the Deep Ecology movement had argued for decades the inherent value of nature, regardless of any human utility), Berry's invitation to articulate in political and legal terms an *ecocentric* worldview was fully articulated by Cullinan in his book *Wild Law*, where he defined this novel *Earth Jurisprudence* as

> a philosophy of law and human governance that is based on the idea that humans are only one part of a wider community of beings and that the welfare of each member of the community is dependent on the welfare of the Earth as a whole. From this perspective, human societies will only be viable and flourish if they regulate themselves as part of this wider Earth community and do so in a way that is consistent with the fundamental principles that govern how the Universe functions (the 'Great Jurisprudence') (in BURDON, 2011, p. 13)

While a full analysis of Cullinan's usage of the term 'Great Law' or 'Great Jurisprudence' is beyond the scope of this paper, it is without a doubt that Cullinan's writing established the theoretical terrain from which a number of Constitutional, judicial and legislative initiatives granting nature both rights and legal subjectivity emerged as part of a larger theoretical trend challenging the inherently reductionist and anthropocentric dominant view of both ontology and normativity, a trend defined by the authors of the present article as an *Ecological Jurisprudence*. (PELIZZON, 2014)

Furthermore, the emergence of an Ecological Jurisprudence has been profoundly influenced, from its inception, by many Indigenous ontologies. Rogério Roque Amaro, for example, explains that the idea of 'Buen Vivir' (or 'Good Life'), central to the Ecuadorian and Bolivian experiences discussed below, was based upon the Spanish translation of four distinct Andean concepts and expressions: 'Sumak Kawsay' (common among the Quechua people of Ecuador, Bolivia, Peru, Argentina, Chile and Colombia), which conveys the sense of communion with Mother Earth, or 'Pacha Mama'; 'Suma Qamaña' (common among the Aymará people of Bolivia, Argentina, Chile and Peru), which equally conveys the meaning of 'full life', 'good life', and 'living together'; 'Teko Porã' (common among the Guarani people of Bolivia, Argentina, Brazil, Paraguay and Uruguay), with its meaning of 'good living'; and lastly, 'Teko Kavi' (also from the Guarani people) meaning 'the good life' or the 'good way of being and living'. (AMARO, 2018)

It is equally important to remember that similar concepts also originated in what Amaro calls 'Southern Epistemologies'. A prominent example is the concept of 'Gross National Happiness' adopted in Bhutan, which is based upon a combination of Buddhist-inspired ideas such as psychological well-being, health, balanced use of time, community vitality, education, diversity and cultural resilience, ecological resilience, good governance and healthy standard of living. Equally, the concept of 'Ubuntu' (originated from the Xhosa people from South Africa and now widespread in the Southern part of the continent), highlights the importance of the interconnection of human beings with one another, with the welfare of one being

inextricably linked to the welfare of the other. The term 'noflay' (from the Wolof language, spoken in Senegal) is the Senegalese equivalent of the Andean concept of 'buen vivir', emphasizing the cultural, philosophical and moral perspectives of all human beings.

The attempt to transcend a dominant anthropocentric worldview entailed by the emergence of an Ecological Jurisprudence thus necessarily implies the profound recognition and valuing of many traditional societies of the global South, including their ancestral knowledge, with a particular emphasis on their community relations and their respect and reverence for Nature. The effort to search for a new collective worldview, in which man and nature share the role of protagonist as interconnected and equally integral parts of the same planet, is thus, clearly, truly global.

PART II – JUDICIAL AND LEGISLATIVE PRECEDENTS

If Cullinan's book *Wild Law* represents a symbolic threshold between a previously more theoretical discussion on the emerging legal subjectivity of nature and the actual implementation of rights of Nature initiatives around the world, the Ecuadorian Constitution of 2008 (often called the "Montecristi Constitution") is the symbolic marker by which this emerging theory became globally recognised as firmly enshrined in practice. The Ecuadorian example, however, followed a 2006 precedent, when, for the first time in recorded legal history, the Community Environmental Legal Defense Fund (CELDF) in the United States included the local ecosystem as a subject of rights in a local ordnance drafted by the small community of Tamaquah Borough, in Schuylkill County, Pennsylvania. Since then, in the USA, more than a hundred local ordnances have been drafted by local communities with CELDF's assistance, the most recent of them being the *Lake Erie Bill of Rights*, adopted by the residents of Toledo, Ohio, in the attempt to prevent the lake's water from being further polluted. While the practical success of these ordnances in legal courts has been questioned, they nonetheless represent a profound desire for an alternative governance model (based on an *ecological jurisprudence*) from (at least a section of) the population.

As mentioned above, notwithstanding the local relevance of these first U.S. examples, it is Ecuador's recognition, in 2008, of Nature's intrinsic rights, guaranteed by four Constitutional provision, that undoubtedly represents the most momentous event in the emergence of Nature's legal subjectivity in practical terms. The Constitutional assembly was deeply influenced by local Indigenous worldviews via the Indigenist movement and political party

Pachakutik Plurinational Unity Movement (see Mijeski and beck, 2011), and thus, at the same time, inscribed within a foundational legal document both rights of Nature (capitalized in the Constitutional text) and a previously excluded (or at least marginalized) worldview – the idea of *Pachamama*, often translated from the original quechua as 'Mother Earth', found within a pan-Andean cosmology. Following the enactment of the 2008 Constitution, the Ecuadorian courts soon began to test the implications of Nature's subjectivity. In 2011, the first successful rights of Nature case (in the world) was litigated in the Provincial Court of Justice of Loja, where the decision by the Municipality of Loja to build a road that would have altered the natural flow of the Vilcabamba river was challenged by two private citizens acting *on behalf of the river*. In a relatively short (and inevitably protean) decision, the Court found in favour of the river, issuing an injunction for the Municipality to repair the damage caused by its actions. Over the decade since the *Vilcabamba case*, more than 35 rights of Nature cases have been litigated in Ecuador, most of them proving successful (KAUFFMAN; MARTIN, 2016).

Then President of neighbouring Bolivia Evo Morales, an Aymara man himself, convened, in 2010, a *World People's Conference on Climate Change and the Rights of Mother Earth* in Tiquipaya, just outside the city of Cochabamba, as a direct and explicit response to the perceived failure of C.O.P. negotiations in Copenhagen at the end of 2009. More than 30000 delegates participated in the conference, including Cormac Cullinan, CELDF and a number of Ecuadorian representatives, and together they drafted a *Universal Declaration of the Rights of Mother Earth*, since then a central document for the entire rights of Nature movement. Inspired by the results, Bolivia passed, in 2010, the *Ley De Derechos De La Madre Tierra* (Mother Earth Rights Law), and, in 2012, the *Ley Marco De La Madre Tierra y Desarrollo Integral Para Vivir Bien* (Law of Mother Earth and Integral Development for Living Well). Bolivian rights of Nature legislation has been, since its inception, less concerned with individualized rights than with collective responsibilities, not only by explicitly articulating a language of *Mother Earth* rights directly cast against rights of *Nature*, but also by developing a comprehensive program for the "integral management of life systems" called a "socio-communitarian productive education model" (ZAMBRANA, 2019).

These Latin-American pioneering examples were soon to be followed by a host of initiatives worldwide. In 2009, following a proposal by the Bolivian government titled 'Harmony with Nature', the United Nations General Assembly proclaimed 22 April as International Mother

Earth Day, and, in so doing, launched the Harmony with Nature programme. As a result, U.N. Members States have begun to recognize that the Earth and its ecosystems are our collective common home and that we collectively need to promote Harmony with Nature in order to strike a fair balance between present and future economic, social and environmental needs. Not long thereafter, the *European Citizen's Initiative for the Rights of Nature* was launched in 2013 in the United Kingdom, while the Green Party of England and Wales endorsed a rights of Nature policy platform in 2016. Pope Francis authored, in 2015, the encyclical *Laudato Si*, subtitled *On care for Our Common Home*. New Zealand, as a result of extensive negotiations with traditional Maori Iwis, granted legal personhood to the Te Urewera forest in 2014 and the Whanganui River in 2017, and is currently negotiating the same recognition for a third geographical feature of the North island, Mt. Taranaki. The Whanganui River legislation is of particular significance as the first instance whereby Nature (or, more specifically, an identifiable natural feature) has been explicitly articulated as a legal *person*. Moreover, it directly and explicitly influenced the 2017 decisions (currently stayed) by the High Court of Uttarakhand, in India, which granted legal personhood to the Ganges and Yamuna rivers and their tributaries, as well as their glaciers, lakes, air, meadows, dales, jungles, forests, wetlands, grasslands, springs and waterfalls. Still in 2017, Mexico City adopted legislation to "recognize and regulate the broader protection of the rights of nature formed by all its ecosystems and species as a collective entity subject to rights", the Australian State of Victoria passed the *Yarra River Protection (Wilip-gin Birrarung murron) Act 2017* (Vic.), which declared the Yarra River (or *Birrarung* in the traditional Woi-wurrung language of the local Aboriginal people) "one living and integrated natural entity", and the NGO *Deep Green Resistance* commenced litigation (since then unsuccessful) in the U.S. in the name of the *Colorado River Ecosystem* in the U.S. District Court in Denver, Colorado, seeking to have the entire ecosystem declared a juridical person. In 2019, Uganda passed the *National Environmental Act* of 2019 recognizing nature as having 'the right to exist, persist, maintain and regenerate its vital cycles, structure, functions and its processes in evolution', while the High Court of Bangladesh explicitly acknowledged the rights of rivers. Following the decisions, first in 2017, by the Constitutional Court of Colombia on the Atrato river, which recognized the Atrato river as a legal subject, and then in 2018 by the Supreme Court of Colombia, which also recognized the entire Amazon basin as a legal subject, a veritable flood of similar decisions occurred, beginning in 2019, such as the Coello, Combeima and Cocora Rivers case (decided in the Regional Court of Tolima), the Cauca River case (decided in the

Superior Court of Medellín), the Plata River case, and the Páramo in Pisba (a high Andean ecosystem) case (decided in the Administrative Court of Boyacá) (HERRERA-SANTOYO, 2020).

Although certainly present from the onset of the movement, Indigenous voices became even more prominent over the last five years. In the USA, the Ho-Chunk Nation voted for a rights of Nature tribal Constitutional amendment in 2016, the Ponca Nation of Oklahoma adopted a customary law recognizing the same in 2018, the White Earth band of the Chippewa Nation recognized the rights of manoomin (wild rice) in 2019, and, in the same year, the Yurok tribe recognized the legal rights of the Klamath River. It appears that Indigenous peoples in the United States are now strategically adopting – by aptly using the unique features of U.S. Tribal Constitutional Law, which protects Indigenous sovereign tribes from State interference – rights of Nature as a legal tool that is, at the same time, understandable by the colonial legal system and capable of conveying some of the (otherwise excluded) metaphysical complexities of traditional worldviews.

What all the initiatives discussed above have in common, however, it the recognition that an *ecocentric* perspective, one where "the earth does not belong to humans, but rather it is humans who belong to the earth" (*Atrato case,* 5.9), is not only preferable but effectively indispensable to prevent an environmental catastrophe capable to threaten human survival. Moreover, what all these approaches show is that "the environmental patrimony is not exclusive to a geographically, jurisdictionally and temporally bounded human community, but rather belongs to humanity in general, including all future generations" (CLARK et al, 2019).

PART III – THE BRAZILIAN CONTEXT

The Brazilian Constitution refers to the concept of development both in its Preamble[2] and in its Article 3, II[3], in this case as a fundamental objective of the Federal Republic of Brazil. Additional reference to technological and economic development, specifically linked to

[2] "We, representatives of the Brazilian people, gathered in the Constituent National Assembly to establish a Democratic State, designed to ensure the exercise of social and individual rights, freedom, security, welfare, development, equality and justice as supreme values of a fraternal, pluralistic and unprejudiced society founded on social harmony and committed, in domestic and international order, to the peaceful settlement of disputes, we promulgate, under the protection of God, the following Constitution of the Federative Republic of Brazil."

[3] Art. 3: "The fundamental objectives of the Federative Republic of Brazil are: (...) II - to guarantee national development."

industrial inventions, can also be found in Article 5, XXIX.[4] Despite the lack of an express definition of development, the right to development is commonly understood as a fundamental right. Firstly, because the material concept of fundamental law goes beyond the express constitutional provision, and secondly, because the right to development is provided for as a human right in a number of international treaties ratified by Brazil.

However, the principles of human dignity and social solidarity – found, respectively, in Articles 1, III,[5] and 3, I[6] of the Brazilian Constitution – allow for an interpretation of the concept of development that implies the concept of sustainability. Equally, Article 170, in disciplining the general principles of economic activity, indirectly point to the concept of sustainability. In terms of environmental sustainability, the Article establishes the "defense of the environment, including through differentiated treatment according to the environmental impact of products and services and their processes of elaboration and rendering" (Item VI); in terms of social sustainability, the Article calls for a "reduction of regional and social inequalities" (Item VII); and finally, in terms of economic sustainability, it refers to "the pursuit of full employment" (Item VIII) and to "favored treatment to small companies incorporated under Brazilian law and that have their headquarters and administration in the country" (Item IX).

Moreover, and more specifically in relation to the environment, Article 225 of the Brazilian Constitution affirms, in its caput, that "[e]veryone has the right to an ecologically balanced environment, a common good of the people and essential to a healthy quality of life, imposing itself to the Government and to the community the duty to defend it and preserve it for present and future generations." In order to ensure the effectiveness of this right, it is incumbent upon the State to

> I - preserve and restore essential ecological processes and provide for the ecological management of species and ecosystems;
> II - preserve the diversity and integrity of the country's genetic heritage and supervise entities dedicated to research and manipulation of genetic material;

[4] Art 5, XXIX: "The law will grant authors of industrial inventions temporary privilege for their use, as well as protection of industrial creations, trademark ownership, company names and other distinctive signs, in view of the social interest and the technological and economic development of the country."
[5] Art. 1: "The Federative Republic of Brazil, formed by the indissoluble union of States and Municipalities and the Federal District, constitutes a Democratic State of Law and is founded on: (...) III - the dignity of the human person."
[6] Art. 3: "The fundamental objectives of the Federative Republic of Brazil are:
I - build a free, just and solidary society."

> III - define, in all units of the Federation, territorial spaces and their components to be specially protected, being the alteration and suppression allowed only by law, forbidden any use that compromises the integrity of the attributes that justify their protection;
> IV - require, in accordance with the law, for installation of work or activity potentially causing significant degradation of the environment, prior environmental impact study, which will be publicized;
> V - control the production, marketing and use of techniques, methods and substances that pose a risk to life, quality of life and the environment;
> VI - promote environmental education at all levels of education and public awareness for the preservation of the environment; and
> VII - to protect the fauna and flora, forbidden, according to the law, the practices that endanger their ecological function, cause the extinction of species or subject the animals to cruelty. (Article 225, paragraph 1)

Additionally, in terms of civil liability for environmental damage, the Brazilian Constitution, under Article 225, paragraphs 2 and 3, provides that anyone who exploits mineral resources is obliged to restore any degraded environment, and that conduct and activities considered harmful to the environment will result in criminal and administrative sanctions. Finally, paragraph 4 states that the Brazilian Amazon Forest, the Atlantic Forest, the Serra do Mar, the Mato-Grossense Pantanal and the Coastal Zone are considered national heritage, and their use will be permitted under conditions that ensure the preservation of the environment, including the use of natural resources.

This brief analysis of the Brazilian Constitution, and in particular of Article 225, suggests that rights related to environmental concerns are both foundational and superior to other rights. The rights to a balanced environment and to a healthy quality of life are inherently diffused, belonging to each and every one at the same time, without the possibility of identifying a singular holder. Gordilho argues that such perspective, however, is still inherently anthropocentric, based as it is upon human dignity. Alternative expressions, such as "common interest of the people" or "diffuse interest", would instead facilitate the characterization of nature as a hybrid good, at the same time both public and private, with public, community and cultural relevance (GORDILHO, 2008, p. 137-138).

At a legislative level, the Brazilian legal system presents a multifaceted landscape. The Brazilian Forest Code (Law n^{o} 12.651/2012) establishes the preservation of forests and other forms of native vegetation, as well as biodiversity, soil, water resources and the integrity of the climate system, its declared objective being the wellbeing of present and future generations, while the idea of sustainability permeates the whole text. On the other hand, the Brazilian Civil Code perpetrates a clearly anthropocentric ontology, by treating all things –

including natural features – as 'goods' to be used by the entity to which they belong (Article 103). A number of Acts exist in relation to animal rights and welfare, such as Law nº 9.605/1998, which criminalizes acts of animal cruelty (such as the abuse, mistreatment, injury or mutilation of native or exotic wild animals, domestic or domesticated), Law nº 7.173/1983, which governs the functioning of zoos, Law nº 7.643/1987, on protection of marine cetaceans; Law nº 11.794/2008, regulating scientific activities involving animals, and Law nº 10.519/2002, on the hygiene and care of animals involved in rodeos and similar fields. According to Gordilho, "the juridical status of animals is already halfway between property and legal personality, since the Constitution expressly detaches them from the ecological perspective to consider them under an ethical approach, prohibiting practices subjecting them to cruelty." (GORDILHO, 2008, p. 122) The Constitutional and legislative context presented here is thus the necessary background against which, as we will discuss shortly, biocentric arguments are currently emerging in Brazil.

PART IV – THE 'RIGHTS OF NATURE' PARADIGM IN BRAZIL

While the terrain for the introduction of a rights of Nature paradigm in Brazil appears to be either Constitutional or legislative, as discussed above, it is the Judgment of Appeal 1.797.175-SP by the Superior Court of Justice, reported by Minister Og Fernandes in March 21, 2019, that represents the first explicit introduction of rights of Nature in Brazil. The case involved the custody of a wild animal (specifically, a parrot), seized by the Brazilian Institute of Environment and Renewable Natural Resources, which is responsible for the protection of the Brazilian fauna. The lower Court of the Municipality of Ubatuba, in the State of São Paulo, had been requested the annulment of the infraction notices issued by the Brazilian Institute of the Environment and Renewable Natural Resources for the improper possession of the wild animal, as well as the restoration of what the claimant called "the original guardianship" of the wild animal apprehended by the institute. The claim was initially deemed groundless. However, the Appeal Court of the State of São Paulo decided, with regard to the "guardianship" of the animal, that it should continue, on a provisional basis, with the claimant, based on Resolution nº 457/2013[7], due to the lack of basic animal care while the animal was under the custody of the Brazilian Institute for the Environment and Renewable

[7] In Brazil, an administrative resolution is an order that pronounces the person in charge of a public service. It is a standard whose scope is limited to the context of the service in question and whose compliance is mandatory. The Resolution nº 457/2013 was edited by the National Council of Environment. It deals with temporary deposit and custody of wild animals seized or rescued by the organs members of the National System of the Environment.

Natural Resources. This provisional guardianship, however, would cease as soon as the Brazilian Institute of the Environment and Renewable Natural Resources could prove the viability of the animal's destination and that proper care could be provided, at which point the animal would be immediately sent to an appropriate place capable of providing daily care.

The decision, however, was not deemed satisfactory by the claimant. According to her, 23 years of close cohabitation between the bird in question and his human companions had created a unique affective bond, which, in turn, had caused the bird to acquire habits incompatible with life in the wild. This argument authorized a special appeal to the Superior Court,[8] in which it was argued that, in removing the wild animal from a long life spent with the plaintiff, the decision of the appellate court contradicted Article 5 of the Law of Introduction to the Rules of Brazilian Law.[9] Considering that the coexistence between the claimant and the animal had continued for more than 23 years, it was argued, a provisional guardianship would have induced high levels of uncertainty and anxiety, destabilizing the emotional and physical wellbeing of the claimant. Moreover, and more importantly for the purpose of this paper, the claimant also argued that the removal of the wild animal after a long period of domestication also implied a violation of the animal's own rights.

The Superior Court argued that, while recognizing that the overall protection of wild fauna is inscribed within a Constitutional framework[10] (which makes the action of the Brazilian Institute for the Environment and Renewable Natural Resources to curb wildlife trafficking commendable), contextual conditions suggest that "the bird's reintegration into its natural habitat, while possible, may cause more damage than benefits, considering that the parrot in question has had pet bird habits for about 23 years." (Supremo Tribunal Federal, 2019) Furthermore, "the constant lack of definition of the animal's final destination clearly violates the dignity of the claimant as a human person, because, despite allowing a temporary relationship, it imposes the end of the affective bond and the certainty of a separation that is not known when it may occur." (Supremo Tribunal Federal, 2019)[11]

[8] In Brazil there exist two Supreme Courts, the first one (Supremo Tribunal Federal) with jurisdiction over extraordinary appeals based on violation of the Federal Constitution, and the second one (Superior Tribunal de Justiça) with jurisdiction over what is called 'special appeal', based on violation of Federal law in general.
[9] Article 5: 'In the application of the law, the judge will attend to the social ends to which it is directed and to the requirements of the common good.'
[10] Article 225, caput and paragraph 1,[10] VII.
[11] The granting of custody in the case in question, however, was conditional on some measures: a) a semiannual visit by a veterinarian specialized in wild animals, to conduct educational training with the person responsible for the bird; b) an annual inspection of the conditions of the enclosure and the animal by the Brazilian Institute

As mentioned in the introduction, Sarlet and Fensterseifer contend that this judgment ultimately addresses the principle of the dignity of the human person from an ecological perspective, with the consequence of unsettling a Kantian anthropocentric paradigm (SARLET; FENSTERSEIFER, 2017, p. 62). Vanessa Hasson de Oliveira suggests that the court could have instead selected the expression "planetary dignity", which proposes the guarantee of the dignity of human life within its larger ecological community, thus including the perception and appreciation of the existence and maintenance of the diversity of life on the planet, which is indispensable to the existence and maintenance of the dignity of the life of the human person (OLIVEIRA, 2016, p. 71). It is indeed without doubt that the decision by the Superior Court of Justice casts wild animals as object of human *custody*, not *possession*, thus departing from the understanding traditionally applied to them by civil law, whereby animals are considered mere goods, object of possession and property.

In implicitly recognizing non-human animals as subjects (rather than objects) of law, the decision makes express mention of Article 20 of the German Constitution as a step beyond anthropocentrism (which provides that "[w]ithin the framework of the constitutional order, the State protects the natural bases of life and animals, also taking into account its responsibility to future generations, through legislative power, and according to the law and through executive and judicial powers"), as well as the Constitutions of Ecuador and Bolivia, with a particular emphasis on the influence of their Andean culture. Moreover, the decision also refers to previous animal rights cases, a prime example being the Habeas Corpus nº 833085-3⁄2005-TJBA159, with judgment on September 28, 2005, which intended to grant freedom to a chimpanzee on the grounds that she was trapped alone in a zoo cage, which had caused clear suffering and loneliness (before a decision could be issued, however, the chimpanzee was found dead in her cage).[12]

While the decision goes beyond the traditional protection afforded to animals by Brazil's Federal legislation, as well as adopting an ultimately biocentric perspective, the decision is not binding and applies only to the specific case. Indeed, it is important to remember that

for the Environment and Renewable Natural Resources, whose observations must be implemented under the penalty of loss of custody.

[12] Another emblematic case was the Habeas Corpus 002637-70.2010.8.19.0000-TJ-RJ, also aiming to free a caged chimpanzee in a zoo, kept in a small and poorly structured cage. This second claim was extinguished without resolution of the merits, with the argument that, even though the court sympathized with the plea, the measure of habeas corpus belongs exclusively to the human being.

Brazil is a Civil Law country belonging to the Roman-Germanic tradition, with a rigid Constitution and centrality of legislation, not of judicial decisions. John Gilissen points out the radical differences of the common law tradition and its emphasis on jurisprudence (GILISSEN, 1995, p. 20), which account for the judicial evolution of rights of Nature arguments in common law countries. In the Brazilian case, therefore, influenced as it is by the Roman-Germanic tradition, judicial decisions are not, *per se*, sufficient to award dignity to the environment in a structurally solid legal manner, considering that, as a rule, they are not binding, their effects being restricted to specific claims and claimants. On the other hand, paradigmatic decisions, such as the one briefly analyzed above, *do* exercise political force, in a type of judicial activism that can generate social mobilization and legislative action. Judicial decisions, therefore, *do* play a fundamental role in influencing new court decisions, and thus, ultimately, in introducing rights of Nature within the Federal legal system. Gordilho asserts that "judicial litigation should not be seen in a different way from politics. Litigation is political activity, connected to political practices and aspirations, although it does not always represent a solid path to social change" (GORDILHO, 2009, p. 101).

Since the Brazilian Constitution establishes the hierarchy between the different types of law, in its article 59, municipal legislation also runs the risk of being declared unconstitutional. Nonetheless, as discussed at the opening of this paper, in 2015, the Municipality of São Paulo proposed an Amendment to the Organic Law of the Municipality[13] nº 04-00005/2015, in which it suggested to include a new provision (180A), "considering that the members of nature have intrinsic rights to life and maintenance of their ecosystem processes, in interdependence with the dignified life of the citizens, with the aim of achieving sustainability in the city" (SÃO PAULO, 2015). Shortly thereafter, in 2017, the Municipality of Bonito, in the State of Pernambuco, amended its Organic Law to recognize the rights of Nature (PERNAMBUCO, 2020), and was soon followed, in 2018, by the Municipality of Paudalho, also in the State of Pernambuco, which, equally recognized Nature as a subject of rights (PERNAMBUCO, 2018).

In all these cases, where proposed legislative amendments undertook the municipal route, the issue is articulated rather briefly, without clarifying many relevant substantive and procedural issues, such as the legitimacy for proposing a legal action and the representation of nature as a

[13] In Brazil, in addition to the Federal Constitution, States and Municipalities have a type of law similar to a "local constitution". Municipalities call this law the Organic Law.

subject of law. Given the Brazilian Code of Civil Procedure does not mention Nature as a subject of legal action, such issues require further, extensive and more profound scrutiny. The relative superficiality of the municipal approach, therefore, may run the risk of municipal legislation about rights on Nature being declared unconstitutional. Consequently, the desire to grant subjectivity to Nature within the Brazilian legal system necessarily requires radical amendments to the Brazilian Constitution itself.

However, while Constitutional amendments are the necessary precursor to engender any form of stability for the novel rights of Nature perspective currently being proposed, Article 225 of the Brazilian Federal Constitution does not permit any obscurity to arise in regard to its interpretation. The issue raised by the Judgment of Appeal 1.797.175-SP and by the municipal rights of Nature proposals, therefore, has broader implications in regard to legal certainty, since, as Celso Antonio Bandeira de Mello points out, an individual must be able to foresee the consequences of one’s actions and plan one’s future (MELLO, 2002, p. 113). While Recaséns Siches poetically equates the feeling of security with the feeling of stepping on firm ground (while the impression of insecurity is equivalent to the fear of falling: SICHES, 1973, p. 301), and Antonio-Enrique Pérez Luño admits that security is an ingrained desire in the life of humanity, who feels terror at the insecurity of one’s existence the face of the unpredictability and uncertainty to which one is subjected (PÉREZ LUÑO, 1991, p. 17), José Afonso da Silva links the theme to the stability of subjective rights. According to da Silva, an important condition of legal certainty is in the relative certainty that individuals have that relations established under a norm must last even when that norm is replaced (SILVA, 1996, p. 412).

The combined analyses of a biocentric jurisprudential perspective and of proposed municipal rights of Nature amendments in Brazil, therefore, indicate unequivocally the need for a significant change inscribed within the Brazilian Federal Constitution, if a rights of Nature discourse had to achieve any form of lasting certainty within Brazil. On the other hand, these Brazilian examples also add to the international discourse introduced in this paper, indicating the global desire for a universal declaration on the rights of Nature under international law capable of bypassing the limitations of domestic law. Karl Larenz wrote, in 1985, that peace and justice, the two main components of the idea of law, are always in a dialectical relationship, constantly shaping each other. If the legal system is unjust, peace cannot be safeguarded. On the other hand, where legal peace is lacking, justice often disappears

(LARENZ, 1985, p. 51). Thus, while the unbridled quest for legal security always runs the risk of immobility and stratification, once society evolves and changes, the law cannot turn a blind eye to social transformations, lest it becomes unjust. Recognizing the limitations of Brazilian legislation in embracing a rights of Nature discourse is thus the first step towards any effective and credible effort towards an ecocentric paradigm that is consistent with the current demands of the global environment.

REFERENCES

A – LEGISLATION

BOLIVIA. *Constitución del Estado Plurinacional de Bolivia* 2008 [Constitution of the Plurinational State of Bolivia 2008].

BOLIVIA. *Ley De Derechos De La Madre Tierra* [Mother Earth Rights Law], Ley N 71, 21 December 2010.

BOLIVIA. *Ley Marco De La Madre Tierra y Desarrollo Integral Para Vivir Bien* (Law of Mother Earth and Integral Development for Living Well], Ley N 300, 15 October 2012.

BRASIL. *Código Civil* (January 10, 2012a). Available in: http://www.planalto.gov.br/ccivil_03/leis/2002/l10406.htm. Access in: October 28, 2019.

BRASIL. *Constituição Federal* (October 5, 1988). Available in: http://www.planalto.gov.br/ccivil_03/constituicao/constituição.htm. Access in: October 15, 2019.

BRASIL. *Lei nº 12.651* (May 25, 2012b). Available in: http://www.planalto.gov.br/ccivil_03/_Ato2011-2014/2012/Lei/L12651.htm. Access in: October 28, 2019.

NEW ZEALAND. *Te Urewera Act 2014*.

NEW ZEALAND. *Te Awa Tupua (Whanganui Claims Settlement) Act 2017*.

PERNAMBUCO. Lei Orgânica do Município de Bonito (December 26, 2016). Available in: https://camarapaudalho.pe.gov.br/2018/12/lei-municipal-no-8782018-declara-como-patrimonio-natural-ambiental-cultural-a-fonte-de-agua-mineral-em-sao-severino-do-ramos-e-da-outras-providencias/. Access in: March 22, 2020.

PERNAMBUCO. Lei Municipal de Paudalho 878/2018. Available in: http://camarapaudalho.pe.gov.br/wp-content/uploads/2018/04/LEI-ORG%C3%82NICA-MUNICIPAL-OFICIAL.pdf. Access in: March 22, 2020.

SÃO PAULO. *Project of Amendment to the Organic Law of the Municipality number 04-00005/2015.* Available in: http://splegisconsulta.camara.sp.gov.br/Pesquisa/IndexProjeto. Access in: March 23, 2020.

UNITED NATIONS. *Agenda 21* (1992). Available in: https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf. Access in: October 22, 2019.

UNITED NATIONS. *Declaration on the Right to Development* (December, 4 1986). Available in: http://legal.un.org/avl/ha/drd/drd.html. Access in: October 22, 2019.

UNITED NATIONS. *Future We Want* - Outcome document (2012). Available in: https://sustainabledevelopment.un.org/futurewewant.html. Access in: October 23, 2019.

UNITED NATIONS. *Harmony with Nature*. Available in: http://www.harmonywithnatureun.org/. Access in: October 23, 2019.

UNITED NATIONS. *Johannesburg Declaration on Sustainable Development* (2002). Available in: https://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/POI_PD.htm. Access in: October 23, 2019.

UNITED NATIONS. *Report of the World Commission on Environment and Development: Our Common Future* (1987)**.** Available in:: https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf. Access in: October 23, 2019.

UNITED NATIONS. Sustainable Development Summit (2015). Available in: ment.un.org/sdgsummit. Access in: October 23, 2019.

UNITED NATIONS. *United Nations General Assembly*, GA RES 63/278, 63rd session, Agenda Item 49(d), UN Doc A/RES/63/278 (22 Apr 2009).

*Yarra River Protection (Wilip-gin Birrarung murron) Act 2017 (*Vic), 1(a)

B – JURISPRUDENCE

BRASIL. Superior Tribunal de Justiça. Recurso Especial nº 1.797.175-SP. Relator: Ministro Og Fernandes. Julgado em: 21 de marco de 2019.

COLOMBIA. Corte Constitucional [Constitutional Court], Decision T-622 10/11/2016 (*Atrato case*).

ECUADOR. *Wheeler et al. v. Director de la Procuraduria General del Estado*, Judgment 11121-2011-0010 (31 March 2011) (Corte Provincial de Justicia de Loja [Provincial Court of Justice of Loja]) (*Vilcabamba case*).

INDIA. *Lalit Miglani v State of Uttarakhand & others* (March 30 2017) MCC 139/2017 (March 30 2017) (*Glaciers case*).

INDIA. *Mohd. Salim v. State of Uttarakhand & Others*, Uttarakhand H.C. 126 (India) (March 20 2017) (High Court of Uttarakhand, India) (*Ganges and Yamuna case*).

U.S. *Sierra Club v. Morton*, 405 U.S. 727 (1972).

C – SECONDARY MATERIALS

AMARO, Rogério Roque. Desenvolvimento ou Pós-Desenvolvimento? Des-Envolvimento e... Noflay! *Cadernos de Estudos Africanos [Online],* 34 | 2017, posto online no dia 11 abril 2018. Disponível em: http://journals.openedition.org/cea/2335 ; DOI : 10.4000/cea.2335. Acesso em: 25.10.2019.

BERRY, Thomas. *The Dream of the Earth*, San Francisco: Sierra Club Books, 1988.

BERRY, Thomas. *The Great Work*. New York: Random House, 1999.

BERRY, Thomas Berry. *The Sacred Universe*. New York: Columbia University Press, 2009.

BURDON, Peter. *Earth Jurisprudence: Private Property and the Environment*. London: Routledge, 2015.

CARSON, Rachel. *Silent Spring*. Boston: Houghton Mifflin, 1962.

CLARK, C; EMMANOUIL, N; PAGE, J; PELIZZON, A. Can you hear the rivers sing? Legal personhood, ontology, and the nitty-gritty, *Ecology Law Quarterly*, vol. 45, no. 4., 2019, pp. 787-844.

COMMUNITY ENVIRONMENTAL LEGAL DEFENSE FUND (Web Page, 30 January 2020) < https://celdf.org/advancing-community-rights/rights-of-nature/rights-nature-timeline/>.

CULLIMAN, Cormac. *Wild Law. 2 ed.* Chelsea Green, 2011.

CULLIMAN, Cormac. A History of Wild Law. Peter Burdon (ed.) In *Exploring Wild Law.* South Austrália*:* Wakefield, 2011, pp. 12-24.

DINIZ, Maria Helena. *Compêndio de introdução à ciência do direito.* 13 ed. São Paulo: Saraiva, 2001.

DINIZ, Maria Helena. *Lei de Introdução ao código civil brasileiro interpretada.* 3 ed. atual. São Paulo: Saraiva, 1997.

FODOR, Amanda Cesario. *A defesa dos direitos dos animais não-humanos como parte integrante do ordenamento jurídico brasileiro*. Monograph presented in the Law Graduation Course. Universidade Federal Fluminense, Rio de Janeiro, 2016.

GILISSEN, John. *Introdução histórica ao direito (Introduction historique au droit*). 2. ed. Translation A. M. Hespanha e L. M. Macaísta Malheiros. Lisboa: Fundação Calouste Gulbenkian, 1995.

GORDILHO, Heron José de Santana. *Abolicionismo animal*. Salvador: Evolução, 2008.

GRAHAM, Nicole. *Lawscape*. London: Routledge, 2011).

HARARI, Yuval Noah. *Sapiens: A Brief History of Humankind*. New York: Harper, 2014.

KAUFFMAN, Craig; MARTIN, Pamela. Testing Ecuador's Rights of Nature: Why Some Lawsuits Succeed and Others Fail. Speech, *International Studies Association Annual Convention*, Atlanta, 18 March 2016.

LARENZ, Karl. *Derecho justo*. Translation Luis Díez-Picazo. Madri: Civitas, 1985.

LUÑO, Antonio-Enrique Pérez. *La seguridad jurídica*. Barcelona: Ariel, 1991.

MELLO, Celso Antônio Bandeira de. *Curso de direito administrativo.* 15 ed. atual. São Paulo: Malheiros, 2002.

MIJESKI, Kenneth; BECK, Scott. *Pachakutik and the Rise and Decline of the Ecuadorian Indigenous Movement*. Athens: University of Ohio Press, 2011.

OLIVEIRA, Vanessa Hasson de. *Direitos da Natureza*. Rio de Janeiro: Lumen Juris, 2016.

PELIZZON, Alessandro. Earth laws, rights of nature and legal pluralism. Michelle Maloney & Peter Burdon (eds.). In *Wild Law – In Practice*. London: Routledge, 2014.

RUSSELL, Bertrand. *A History of Western Philosophy*. New York: Simon and Schuster, 1945.

SANTOYO, Hector Herrera. The Rights of Nature (Rivers) and Constitutional Actions in Colômbia. Available in: < https://gnhre.org/2019/07/08/the-rights-of-nature-rivers-and-constitutional-actions-in-colombia/>. Access in: January 30, 2020.

SARLET, Ingo Wolfgang; FENSTERSEIFER, Tiago. *Direito constitucional ambiental*: Constituição, direitos fundamentais e proteção do ambiente, 5. ed. São Paulo: RT, 2017.

SICHES, Recaséns. *Nueva filosofía de la interpretación del derecho*. 2 ed. ampl.. México: Porruá, 1973.

SILVA, José Afonso da. *Curso de direito constitucional positivo*. 11 ed. São Paulo: Malheiros, 1996.

STONE, Christopher. Should Trees Have Standing? Towards Legal Rights for Natural Objects. *California Law Review*, vol. 45, 1972, pp. 450-501.

STONE, Christopher. *Should Trees Have Standing?*. 3 ed. Oxford: Oxford University Press, 2010.

SWIMME, Brian; TUCKER, Mary Evelyn. *The Journey of the Universe*. Neu Haven: Yale University Press, 2011.

ZAMBRANA-FLORES, Ivan. Mother Earth approach in the implementation of Education and Climate Change. *UN Harmony with Nature program*. Available in: http://files.harmonywithnatureun.org/uploads/upload808.pdf. Retrieved March 20, 2020.