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Global environmental politics in Brazil as a mirror of the human society-nature duality and the challenges of the antropocene (The title was modified. See below)

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The society-nature duality has structured the way we have been organizing our economies, political and social systems across the globe: the national and sub-national boundaries do not coincide with ecosystems or river basins; the pace of extracting resources and disposing solid, liquid and gas residuals are much faster than nature's recovery capacity; there are no "nature rights"; future generations do not vote neither consume. Overexploitation and excessive waste have resulted in the transgression of at least three planetary boundaries: climate, biodiversity, and the global nitrogen cycle.

Unlike territories and for-one-generation profits that have framed world politics, nature operates in different temporal and spatial dimensions. Consequently, environmental politics as a field of study and action challenges many of our assumptions and cleavages. The idea of a world divided between developed and developing countries becomes progressively inadequate to understand the governance of the Earth system.

This paper aims at discussing how different actors in Brazil have constructed and given different meanings to global environmental politics. The main argument is that environmental politics is about questioning the society-nature duality, and re-organizing the way we produce, consume, and relate to each other as groups and individuals, and as a kind of " planetary we".

Socio-environmentalism: filling the governance and knowledge gaps in IR environmental studies (new title)[1]

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Mamirauá

The creation of Mamirauá Sustainable Develoment Reserve (RDS) stemmed from the work of a coalition drawing together the conservation movement (conservation biology) and local communities (Movimento de Preservação de Lagos). (Inoue and Prado 2007). Mamirauá project aimed at integrating research, biodiversity conservation and sustainable development. The project was submitted to the British government as well as international NGOs like WWF-UK, Conservation International (CI), and Wildlife Conservation Society (WCS), and to the Brazilian government through CNPq[2] and the FNMA – National Fund for the Environment of the Ministry of Environment. After hard negotiations, it was approved by the British and Brazilian governments.

Mamirauá project, thus, started in 1991 and was ended in 2002, but its objectives and activities are still going on. Mamirauá was the first Sustainable Development Reserve (MSDR) established in Brazil. The new category of protected area was also incorporated by the Brazilian legislation. The Reserve was considered innovative at the time of its creation not only because the rights of the local population to remain within and around it were recognized but also because of their roles as actors in the process of elaboration and implementation of its Management Plan.

Part of the explanation for Mamirauá existence is found in a transnational network of primatologists and other Amazonian-oriented researchers, who had similar ideas about biodiversity conservation and the need to include local populations in the process. That network can be considered an epistemic community (Haas 1992) because they shared not only principled ideas and objectives but also a knowledge basis. The network contributed by bringing financial support from their institutions and acceptance among conservationists worldwide. Such aspect is sometimes overlooked but is essential to make policies to work. Besides, there was Deborah Lima's anthropological research about the local population and their fragile social-economic situation conditioned by social and environmental factors. She contributed to the realization that it was not possible to do biodiversity conservation without taking into consideration the local population that lived in the area (Inoue 2007).

Mamirauá case represents an innovative experience that tries to overcome the limitations of top-down and fence-off approaches of biodiversity conservation. However, it also brings the ambiguities of including human populations in protected areas: understanding and securing the social processes of human reproduction and defining the aimed-for standard of living for its population imply to ask what exactly is intended, and in what areas one has the right to intervene[3]

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[1] Draft version – please do not quote without consulting the authors.

[2] CNPq – Brazilian National Council for the Development of Science and Technology gives financial support for researches and provides scholarships for graduate students.

[3] Lima 1999, p.252

It can be seen as an example of the concept of socio-environmentalism. Socio-environmentalism and socio-biodiversity have been notions that have framed global environmental politics in Brazil in the last three decades. These notions represent the convergence of values related to ecological sustainability, social justice and cultural diversity and a demand for participation in decision making not only the in local, but also in the national and global levels. The participation of local populations also make sense because their considerable knowledge of flora and fauna together with the sustainable management and use of these resources. They have been historically using such resources in a more sustainable way. Moreover, local communities' and indigenous peoples' traditional *knowledges* have been said to be non-dualist (or to a certain extent less dualist) concerning society-nature, as well as, to be able to perceive other dimensions of reality beyond western rationality (Narby 1999, Albert 2002).

Introduction

As most of recent texts on global environmental politics, we start by stating that there is an environmental crisis caused by the exponential growth of human activities on the Earth System. The increasing pressure on ecosystems, soil and water, climate and the atmosphere has the potential to trigger sudden or irreparable environmental changes that can harm human and non-lives on Earth (Rockström et al. 2009). As we enter the Anthropocene (Rockström et al, 2009) almost all environmental problems become global commons. As a consequence, there is growing need for cooperative action among societies, in order to avoid classic problems such as free-riding and the tragedy of the commons (Harding, 1968). Moreover, the poor populations in emerging and developing countries are likely to be the most affected.

However, what we observe in the sustainability area is a governance gap, a growing distance between the magnitude of the crisis and the path of concrete changes needed in the political-economy systems across the globe. This happens in all levels of governance, from global to local. Both individuals and the social structures they have built behave within short-term and egoistic considerations (capitalism, democracy HELD, etc) when the construction of a safe operating space for humanity demands cooperative action. As Viola et al stated, the international system is also dominated by this conservative tendencies (Viola, Franchini, Ribeiro, 2013).

Therefore, this is the main challenge for social sciences in the 21st century, how do we approach governance in the Anthropocene? How do we deal with this growing demand for collective actions in times of egoistic short-termed impulses and behavior in most societies? IR tradition dealing with sustainable issues has been problematic. Conventionally, the environment was considered merely an issue area, or a set of environmental problems, and only more recently there has evolved a body of IR green theory, but it is still under construction (Eckerseley 2010). Thus, much can be learned from experiences at the local level around the world, and concepts can be de-constructed and re-framed.

Learning from the Brazilian experience in the Amazon known as socio-environmentalism, we identify two movements that can help building a new equilibrium to the earth system. The first is analytical and practical and refers to the need to rearticulate different level of analysis and scales: from local to global and to go beyond dichotomies such as public and private. The second suggests the necessity to construct dialogues and synergies between different epistemologies and worldviews. The underlying assumption is that we need to move beyond cognitive and epistemological dualities, especially the duality nature-society, global-local, and even North-South, to construct Earth system governance, and in order to do that we need to go beyond modernity.

We call the first movement as vertical dialogue. We still see the environment as a global problem, but we will argue for the need to bring in different local worldviews. As we show empirically, there are cases in which developments in the global level of governance can be helpful for geographically located socio-political structures. In this sense, the global-local antithesis has to bee abandoned as an a priori assumption

The second necessary movement is called horizontal dialogue. Debates on complexity, trans-disciplinarity, and holistic knowledge paradigms have claimed for the need to overcome the borders that separate sciences, philosophy, art and spiritual traditions (Weil et. al 1993, Morin 1998, Leis 1999), or to integrate reason, sensation, emotion, intuition, that is, the different ways through which we perceive and know reality in order to deeply understand reality (Leis 1999, Adorno & Horkheimer , Marcuse). Moreover, local populations, particularly, but not only, indigenous peoples, and socio-biodiversity evidence that there are knowledge(s) of and practices about nature that can contribute to go beyond the dualisms, rationalism and the anthropocentrism of modernity (Ramos 2013, Panel 3/Santos 2006, Narby 1999).

The recent debates on international relations theory beyond the west and the expansion of IR discipline geographical borders (Waever and Tickner 2009, Acharya and Buzan 2010, Tickner and Blayney 2012) corroborate to reshape the notions of global environmental politics and Earth system governance in the direction of overcoming the duality nature-society, anthropocentrism, the prominence of instrumental reason, and the North-South and global-local gaps. Not so much for the potential of local knowledges to become a general framework for analyzing global problems (Tickner and Blaney 2012) but for the potential of local-global interactions in the field to contribute to bridge the gaps between different knowledge systems.

In this chapter, we problematize the way in which IR theory has dealt with the environment considering the vertical and horizontal dialogues. We focus on three relevant IR traditions: realism, for being the mainstream narrative of our field; liberal-institutionalism, because of its tradition in environmental studies; and governance, because of its growing relevance as analytical framework in environmental studies.

We argue that, regarding vertical integration, realism and liberal-institutionalism have serious deficits, most of them related to their known state-centrism. Governance

literature, on the other side, has been capable to integrate different levels of analysis, becoming a strong analytical framework to assess global environmental politics to go beyond dichotomies such as global-local, and North-South. Regarding horizontal integration, however, no IR tradition has done major improvements. Realism and liberal-institutionalism are almost ontologically incapable of assimilating non-modern worldviews, because of their rationalist structure of agent incentives. The governance approach, being more constructivist regarding social processes, is epistemologically capable to incorporate other forms of knowledge, but, as far as we know, it has not done that yet. The further this literature has gone is multi-disciplinary, such as Earth System Governance, but it is still under the modernity umbrella.

We state that the concept of socio-environmentalism can be a contribution for the debates in green IR theory, since it involves dialogues among different agents in the governance structure, and the dialogue between different world-views. We will focus on the Amazon region as a locus of global environmental politics that is representative of the contradictions of modernity, where many governance experiments that have been going on since the 1980s evidence the paradoxes of the global-local interactions, and where complexity suggests the need for the epistemological changes in the way we conceive reality and in how we construct social life in order to overcome the duality society-nature.

In order to achieve our goals, the chapter is divided in two parts. Part 1 discusses the literature gap, the deficits of IR traditions regarding the environment. In Part 2, the concept of socio-environmentalism is proposed as an example of governance and knowledge integration in IR. The chapter is closed with some final considerations.

Part 2: the literature gap

According to Eckersley (2010, p.258) environmental problems have never been a main concern in the discipline of International Relations (IR) but from the 1970s onward there emerged a sub-field of IR concerned with environmental cooperation.

In this section we focus on the limitations of traditional IR regarding the environment. These limitations have already been discussed in IR literature and they come from a varied spectrum – realism, liberalism, constructivism, and other post positivists narratives - here we just reorganize them, hoping to offer a better illustration of those limitations.

We focus on three traditions: realism, for being the mainstream approach in IR studies; liberal-institutionalism, for being the traditional and hegemonic analytical tool used to assess global environmental politics and; global governance, because its recent development as the main theoretical framework for environmental studies.

2.1 The Vertical Gap

There is vertical gap in conventional IR theory that does not consider the diversity of actors, levels of analysis and scales. Vertical dialogue is the capacity of a

theoretical framework to apprehend international relations as a complex social field that integrates different actors with a wide definition of ideas, interests and incentive structures. Those agents are located in double continuum: from local to global, and from public to private. They are also involved in causal and constitutive relations among themselves and between them and social structures. In this sense, individual citizens, nation-states, NGOs, epistemic communities, etc., are capable of shaping the social outcome at the international level, depending of course, on their agency level (Biermann et al, 2009).

Many studies (Keohane and Nye 1971 and 1989, Haas 1992, Risse-Kappen 1999, Keck and Sikkik 1999) highlight the limitation of realist tradition to consider other actors than the nation-state as relevant players in international relations. In this tradition, the basic dynamics of the international system is the conflictive relation between nation-states. In this way, even international organizations – which have been the main instrument of environmental international politics - are only epiphenomena of State behavior.

Furthermore, States are supposed to guide their behavior with relatively independence from the society and the market, always seeking to secure its national interest defined rationally in terms of material concerns – basically security and economy. Within this framework, environmental issues are not relevant per se, but only if they contradict basic security or economic interests of the State.

The liberal tradition in IR has been more willing to accept environmental issues as a main part of the international agenda. The regime analysis within institutional liberalism has been the predominant analytical tool to study international environmental issues in the last four decades (OKEREKE E BULKELEY, 2007, Patterson, 1996, Eckersley 2010, p.2010). However, IR literature has also identified some limitations for this tradition in terms of vertical integration (Okereke e Bulkeley, 2007, Patterson, 1996, Eckersley 2010, p.2010). For instance, the concept of international regime has been related to interstate relations and to national responses to a set of principles, norms, rules and decision-making procedures agreed among states. Even though the definition put forward by Krasner makes it possible to consider other actors and their expectations, the way such concept has been used in the literature mainly concerns state decisions and actions (Stokke, 2000, Porter et al, 2000).

Thus, as in realism, liberal institutionalism has focused on State behavior – formal regimes: treaties between States – to assess global environmental issues. In this tradition, the State is also a rational actor, guided by economic gains and engaging in cooperation as the better way to respond to international problems.

Paterson (1998) criticized the focus on environmental regimes that characterized the mainstream literature. He argues that there is a need to further develop what he calls "green politics", a tradition that rejects the idea that the states-system and other structures of world politics could provide a response to the environmental crisis. Accordingly, the author stated that two main sets of literature could be used to develop

a green position on IR/global politics: "Green Political Theory" and "Global Ecology". The first body of literature rejected the anthropocentric world-view and highlighted the "limits to growth" argument about the nature of the environmental crisis (Eckersley 1992, Goodin 1992, and Dobson 1990 apud Paterson 1998). The second built on the green principles and provided an analysis of the environmental crisis, in other words, Paterson argues that "global ecology" provided an explanatory foundation and had two central themes: development as the root cause of environmental problems; and the protection and reclamation of "commons".

Only by the 2000s, one could start identifying a growing body of green IR theory that would go beyond environmental issues. Eckersley (2010) states that a green position has emerged drawing on more radical green discourses from outside the discipline of IR and has helped to expose what she called as the ecological blindness of IR theory. According to Eckersley (2010), green IR theory emerged primarily out of a critique of mainstream rationalist approaches (neorealism and neoliberalism), and it has simultaneously drawn upon, and critically revised and extended, neo-Marxist inspired International Political Economy (IPE) and normative international relations theories of cosmopolitan orientation, bringing new discourses of ecological security, sustainable development (and reflexive modernization), and environmental justice. The author (Eckersley 2010) subdivides Green IR theory into an IPE wing and a normative or "green cosmopolitan" wing. The first offers an alternative analysis of global ecological problems to regime theory, while the second articulates new norms of environmental justice and green democracy at all levels of governance. She locates green IR theory on the critical/constructivist side of the rationalism versus constructivism debate (Eckersley 2010).

Eckersley (2010: 265) argues that

> (…) green IR scholars seek to articulate the concerns of many voices traditionally at the margins of international relations, ranging from environmental non-government organizations, green consumers, ecological scientists, ecological economists, green political parties, indigenous peoples, and broadly, all those seeking to transform patterns of global trade, aid, and debt to promote more sustainable patterns of development in the North and South.

Eckersley calls the attention, however, to the fact that the international normative and political economy dimensions of this new green tradition have been less sharply etched than their domestic counterpart because they are still in a formative phase of development (Eckersley 2010, p. 260). We suggest that discussing the concept of socio-environmentalism can contribute to this tradition.

Within this context, another analytical framework has become relevant in dealing with global environmental issues in the last decade: global governance. Since its early developments in the 1980s, this narrative is more suitable to assess the role of non-state actors in the international system and, hence, more convergent with the idea of vertical dialogue. However, there are also some limits within this tradition. First, the

very concept of global governance is quite vague (Finkelstein 1995), consequently, the research and analysis inspired in this concept can be very heterogeneous. Second, part of global governance literature is quite similar to neoliberal regime analysis, in terms of focus on the State and formal international regimes. Nonetheless, there is a stream within environmental global governance tradition that fits our criteria for vertical integration: earth system governance (Biermann, 2009). We will return to this point in the next section.

Thus, we could argue that in the IR field in general as well as in Brazil the focus on environmental regimes and institutions predominates. Such research agenda goes beyond the neoliberal framework as it encompasses more constructivist approaches that centers on the role of norms, ideas and scientific knowledge, but it is still very much state-centric and focused on issue-areas, and does not deal with multiple scales and levels.

That focus on the state and institutions created some arguable dichotomies in the field of global environmental politics. Since 1972 - the Stockholm Conference on Human Environment - the main cleavage that has dominated the political arena and most analysis has been the North-South divide, or the clash between developed and developing countries. The conflicting interests between these two groups, the way the negotiations have been structured, and the complexity of the problems have dominated the narrative in politics, academics and, the media. However, in our view, this cleavage is part of the problem and the idea of a world divided between developed and developing countries becomes progressively inadequate to assess the governance of the Earth system.

In this way, we find inconsistent to defend that a dichotomy category can capture the heterogeneity of the countries in terms of GDP, per capita income, military power, political power and environmental capabilities and commitment (Viola, Franchini e Ribeiro, 2013). What the category of "developing country" tell us about that society in terms of political regime, economic institutions, type of social contracts or, the protection of the environment? To put an example, under that classification, Brazil, a big middle income country economy with a big share of global GEE emissions and a climate law, is in the same category as Bolivia, a little low income economy with unexpressive GEE emissions and no climate legislation.

Furthermore, this idea is based on a state centric view of world politics, which is also part of the modernity package. If we consider a wider concept of agency, it is possible to discover some instances where "North" and "South" work together to protect the environment and empower local populations. Marimauá case study is one of those instances. Interestingly, the North here is represented by international NGOs and the "South" by local communities, and both are able to modify the Brazilian government – another representative of the "South" – into more sustainable ways.

2.2 The horizontal gap

Mainstream IR theories have lacked the capacity to incorporate other worldviews as well as other forms of knowledge. We call horizontal dialogue the capacity for a conceptual framework to assimilate different types of knowledge and world visions – this is, different kinds of ontologies and epistemologies. In this sense, we stand by the argument of the limitation of mainstream IR (realism-liberalism) to only conceive knowledge in terms of positive science – grounded in its modern view of the world and social processes. There is a vast and diverse literature covering this issue (LISTA), that cannot be covered here, however, we would like to bring some thoughts regarding this limitation – or the "conceptual jails" of modernity - in environmental studies.

Leis (1999) argues that modernity is unsustainable, meaning that anthropocentrism, instrumental rationality, modern dualities, the organization of knowledge into disciplines and fields, and the consequent separation between nature and human societies are the roots that underlie the drivers of the all the environmental problems we face. The domination of nature is seen as a consequence of how the relation between societies and nature has been constructed. The quest for eco-development, sustainable development, green economy, low carbon economy or other blueprints has not taken us further, and the predominant development paradigm has not changed. The way to overcome the crisis would be to go beyond modernity, incorporating pre- and post-modern ways of thinking and finding solutions, as shown in the next section.

While Leis (1999) recognizes that international politics is dominated by political and economic actors, who are orientated by an individualist and competitive rationality, and find few reasons to cooperate, he considers that the causes of the ecological crisis go beyond an eventual lack of understanding of the environmental threats and risks, or the insufficient political will to deal with the issue. Leis asserts that the broad and complex solutions that are needed transcend the capacities of science, technology (technique), and of existing political institutions. For him, the complex interrelation of the environmental problems with economics, politics and culture suggests that the their solution encompasses a wide spectrum of levels of knowledges and practices that include not only natural and social sciences, but also culture, philosophy, and religion in a broad sense.

In his view, the international system constituted by sovereign states has become more and more inefficient to maintain order. The socio-environmental global crisis and the erosion of nation-states force us to rethink the basis upon which we build politics.

According to Leis (1999), we live in an era of political decline. There is a decline not only of politics but also of political theory. Through an ecological stand, one of the causes can be attributed to the change in the human condition on Earth. Human beings have been animals capable of living in society (zôon politikon apud Aristoteles) for centuries, but now have ended up as "animals", whose society put into question their

condition as living beings. Thus, the ecological root of the decadence of politics generates the challenge and opportunity to review and transform the political order to expand the content of the polis. In this sense, the natural world is part of politics, for it is affected by political decisions, as well as, it conditions and transforms politics.

As pointed by Stern (2007), the predominant paradigm of social and economic development remains unchanged and unaware of the risk of human induced environmental disaster, this represents a profound dilemma, because, while the risks of environmental disasters grow, the majority of the human populations on the Earth still live in poverty, under human rights abuses, without freedom. Thus, it is hard to argue for limits to growth or to admit that there are planetary boundaries that cannot be trespassed. However, there are thresholds and risks that cannot be ignored. There have been evidences of global environmental change that already cause concern.

Leis (1999) states that the benefits and damages of today's world can be firmly placed on central aspects of modernity. For him, modernity has happened on the material plan, with the broad scientific and technological transformations and the expansions of the market. The consciousness about the ecological limits of economic growth does not depend (rely) on the free market, but on the actions of the environmentalism, through a project he calls realist-utopian. That project, as we detail in the next segment, is not entirely new, since it combines existing but opposite phenomena.

In this direction, Leis (1999) argues that the dualist view of nature and society is one of the main characteristics of the western culture, particularly, of the modern era. Duality can be highlighted by the deep belittling of the wild animals and forests that happened in the first centuries of this era. In the XVIII Century, extensive deforestation happened in the territory of England, it is repeated in the rest of Europe, and so worldwide, driven mostly by European colonization. Leis (idem) emphasizes that some meanings for virgin forest in the XVII were: terrible, wild, desert, gloomy, dark, uninhabited and plagued by beasts. Progress meant move away from the forests, as men who lived there were considered rude and barbarian. that radical separation enabled the unlimited domination of humans over nature, which was required by the advance of the productive forces (Leis 1999).

The society-nature duality has structured the way we have been organizing our economies, political and social systems across the globe. Socio-political life happens within nation-states with their territories organized around the idea of national and subnational boundaries that do not coincide with ecosystems or river basins. Democracies are arranged around voters and candidates that represent only present generations, future generations and nature are not represented. Economics is structured in markets, profits, production and consumption, and the idea of exploitation of nature in the present, so that the pace of extracting resources and disposing solid, liquid and gas residuals are much faster than nature's recovery capacity. Future generations do not vote, neither consume. There are human rights, but no nature's right.

In sum, social sciences in general and IR in particular have been constructed on top of anthropocentric cultures and epistemologies that do not take into consideration the interaction nature-society. Moreover, science is an important form of knowledge, but it is not the only one. Horizontal dialogues could bring to the debate other worldviews and knowledges in order to go beyond anthropocentrism and the dualisms of modernity.

Part 3: Filling the gaps

3.1 Socio-environmentalism, Earth system governance and the vertical gap

As mentioned, governance literature has explored different levels of analysis, becoming a strong analytical framework to assess global environmental politics beyond dualisms such as state and society, global-local, and North-South. This body of literature can be related to the green IR theorists, mentioned by Eckersley (2010), who have identified and analyzed new, hybrid and network patterns of authority and have *produced a more complex and layered picture of global environmental governance* (Eckersley 2010:268).

Especially Earth system governance (ESG) is a valuable tool. According to Biermann et al (2009:4), Earth system governance is defined as:

> the interrelated and increasingly integrated system of formal and informal rules, rule-making systems, and actor-networks at all levels of human society (from local to global) that are set up to steer societies towards preventing, mitigating and adapting to global and local environmental change, and in particular, earth system transformation, within the normative context of sustainable development.

Besides this notion of multilevel governance, this piece of literature is convergent with our proposal in three other ways. First, in the need to consider both natural and social factors in environmental studies. In the same line as Leis (1999) proposal, ESG is "as much about environment parameters as about social practices and processes" (Ibid:22). Second, the need to transcend the traditional focus on the state and regimes, since the problem is wider than "the regulation of global commons though global agreements and conventions" (Ibid:23). And finally, the need for knowledge integration "The analysis of earth system governance thus covers the full range of social science disciplines across the scales, from anthropology to international law" (Ibid:23).

We argue that socio-environmentalism in the Amazon evidences this more complex and layered picture, linking the global and local and per passing state jurisdictional boundaries, as well as, it reflects the need of a more nuanced discussion on global environmental norms, as pointed by Hochstetler and Keck (2007). Moreover, socio-environmentalism represents an attempt to bridge the social and environmental dimensions of political struggles that gained force with the democratization process in Brazil. Thus, empirically, socio-environmentalism can be seen as a transnational-national movement, that evidences the role of non-state forms of deterritorialized

governance by non-state and state actors.

Historically, socio-environmentalism is part of broader context described by Pádua (2002), in which the environmental critique is neither European nor colonial, but developed and continues to develop as endogenous questions to the universe of modernity. As a concept, it can potentially contribute to bridge the gap society-nature and to bring other forms of knowledge into the debate.

a. Socio-environmentalism – principles and norms in context.

According to Hochstetler and Keck (2007), scholars have explained the widespread adoption of environmental protection measures over a comparatively short period of time through theories of international norms diffusion (Finnemore and Sikkink 1998 apud Hochstetler and Keck 2007), which vary in how conflictual this process is portrayed to be. Studies like the one by Frank, Hironaka and Schofer (2000) relate global environmental protection norms and domestic environmental practices around the world. However, at this very aggregated and consensual level, the spread of environmental protection can be portrayed in ways that flatten most of the real content of environmental politics in a country like Brazil (Hochstetler and Keck 2007). In Brazil, the emergence of socio-environmentalism was reinforced by the global environmental movement of the 1980-1990s, but is considered a specific development from the Brazilian context (Hochstetler and Keck 2007, Santilli 2008, Padua 2012).

Hochstetler and Keck (2007) argue that *more nuanced discussions of global struggle over norms help us to identify processes at work that stimulate and shape national debates over those norms, which in turn influence the country's global role*. In Brazil, social justice is a strong dimension of the social movements' struggles, including the environmental movement. Hence, socio-environmentalism holds the underlying assumption that one cannot separate ecological from social sustainability.

In this way, a broad understanding of socio-environmentalism encompasses three ideas or concepts, upon which it has been built and defined. First, Socio-environmentalism evolved upon the concept that a new development paradigm should promote the sustainability of species, ecosystems and ecological processes (ecological sustainability). Second, it should include social sustainability, that is, it should contribute to poverty and social inequality reduction, thus, the ideas of justice and fairness are intrinsic to the social-environmentalist values. Lastly, cultural diversity should be promoted and valued, as well as, the consolidation of the democratic process, understood as the broad social participation in the management of the environment (Santilli 2005). Environmental public policies should include and involve local communities as the holders of knowledge(s) and practices of environmental management

Despite the differences, the tendency of social and environmental convergence has been identified since the 1990s in Brazil. In a research conducted by WWF-Brazil and ISER (Brazilian NGO) in 2000 with the Amazonian population, leaders and opinion

makers, it was seen as a ”maturity sign” of the environmental movement: *the theoretical framework that guides action is socio-environmental and sustainable development the discourse of the organizations* (WWF 2001:19). The prestige of the organizations was related to the association between the social and environmental issues. (WWF 2001).

According to Santilli (2005), socio-environmentalism defined concepts, values and paradigms that have had effects on the legal order in Brazil. The author argues that before the emergence of socio-environmentalism the Brazilian environmental laws concerned the protection of ecosystems and species without incorporating a social dimension (Santilli 2005). Moreover, the practice of socio-environmentalism resulted in innovative projects and programs as well as institutional innovations that can be viewed as new forms of governance.

b. Socio-environmentalism and transnational-national social movements in the Amazon: global-local governance?

Hochstetler and Keck (2007) highlight three explanations for the emergence of socio-environmentalism: the democratic transition and the end of military dictatorship; the murder of Chico Mendes in Acre in 1988 that generated widespread discussion of links between the livelihood struggles of traditional forest peoples and the protection of the Amazon; and the preparatory process for the United Nations Conference on Environment and Development in 1992 that brought together environmental organizations, women’s organizations, urban and rural trade unions, and other social movements.

Democratization allowed civil society to have more space for mobilization and articulation and to forge strategic political coalitions between social and environmental movements (Santilli 2005). In the Brazilian Amazon, the interactions between indigenous peoples and traditional populations resulted in the creation of the Alliance of Forest Peoples, in February 1989. in Rio Branco, Acre. It was created to support collaborations between indigenous people and rubber gatherers in conflict with land grabbers and timber-dealers in Acre, and also to enable coordination of the organizations at national level in the claim for their rights and defense of their alternative proposals[4]. According to Santilli (2005), the Alliance of Forest Peoples fought for the Amazon traditional populations’ livelihood – both physical and cultural - that depended on the conservation of the forest, and was threatened by deforestation and the depletion of natural resources. The drivers of this predatory mode of nature exploitation were the construction of big highways, forest slash-and-burn for cattle raising and farming, and the migration of thousand of settlers and farmers to the Amazon region.

As the, so called, traditional populations of the Amazon joined together, they also built coalitions with Brazilian and foreigner environmentalists, who were part of

[4] http://www.ipam.org.br/biblioteca/livro/The-Alliance-of-Forest-Peoples-Historic/17, access Oct 4th 2013.

transnational networks (Keck and Sikkink 1999), and who started to support their political and social struggles. Environmentalists realized that their livelihood and extractive economic activities were not predatory, but a potential way to make it economically worth keeping the forest, and an alternative to the environmental impact of the development projects.

Thus, as Lima (1999) argues, in the Amazonian context two social movements converged: i) a grassroots movement that formed to defend natural resources that are essential to their livelihood, and ii) environmental NGOs.

Furthermore, in several cases, these socio environmental movements have been successful to put political pressure and to obtain governmental support to legalize their proposals. As our initial history shows, one mechanism that has been used has been the creation of protected areas or the revision of the existing ones, such as Mamirauá Sustainable Reserve, 11 federal and state extractive reserves, Jaú National Park and the Tapajós National Forest (Lima, 1999).

Lima (1999) affirms that the majority of projects that involve ecological partnerships were initiated in the late 1980s and early 1990s. Such was a consequence of the changes in the Amazonian socio-economic context and new theoretical concepts in fields like conservation biology. Inoue (2007) brings evidences of the relationship between the existence of a transnational conservation biology epistemic community, a global biodiversity regime and local practices in Brazil.

Socio-environmental programs, projects and initiatives in the Amazon have promoted many objectives. Most of them have been guided by the "socio-environmental" paradigm (WWF 2001), but have been framed, as well, by global principles and objectives like biodiversity conservation and sustainable use, sustainable development, REDD+, and so on. Thus, these projects have been conceived in terms of local and global values: for instance, protecting biological diversity whilst promoting local sustainable development. More importantly, they can be considered the results of international, transnational and transgovernmental relations among different actors like international and national NGOs, bilateral and multilateral cooperation agencies, governmental organs, researchers/scientists, grassroots organizations and local populations.

Positive results can be seen. Rubber tapers, loggers, fishermen, indigenous people have found economic alternatives that do not destroy the ecosystem on which they depend. Institutional innovations like extractive or sustainable development reserves, fishing agreements and new rules that promote sustainable use of natural resources have been set. Thus, we could argue that these practices can be conceived as multilevel and or deterritorialized governance arrangements, involving cross scale interactions from global to local levels. In sum, the emergence of socio-environmentalism as a discourse and practice has been intrinsically related to the processes of redefinition of norms and concepts, as well as, of emergence of new forms of governance that bring together state and non-state actors across national jurisdictions from global to local.

c. *Socio-environmentalism neither exogenous nor endogenous, beyond the North- South gap – critique of modernity*

As argued, socio-environmentalism as a discourse and practice can be viewed as a result of the combination of global and local dynamics, evidencing that the process of norm diffusion is more complex than it has been portrayed. Socio-environmentalism can also be seen as an expression of new forms of governance that cut across state jurisdictions and are intrinsically global-local. Santilli (2005) considers that socio-environmentalism is a Brazilian "invention", and as such, does not have a parallel in the international environmentalism. Hochstetler and Keck (2007) recalled Padua's (2002) work that demonstrated that environmental ideas have a long history in Brazil.

Pádua (2002) shows that the environmental critique in Brazil dates back to the colonial times. In fact, he found that there was an extensive theoretical thought on the environment during the XVIII-XIX centuries in quantitative and qualitative terms[5]. In his view, it is not surprising that the European or North American historiographies do not know it, which only reflects the difficulties of recognizing the contributions of other regions of the planet, specially the former colonial spaces, to the formation of the contemporary thought. The main problem is how this intellectual tradition was forgotten in Brazil, and has contributed to the superficial opinions like the ones that point to the environmental issue as being external or out of place in the Brazilian political debate. Brazilian intellectuals let this memory be forgotten for a while.

Accordingly, Pádua (2002) considers the relevance of the XVIII and XIX Century Brazilian authors to the understanding of the genesis of the ecological sensitivity in the modern world. Pádua (2002) asserts that there is a need to associate this genesis with the modernity dynamic in larger perspective, as his study and other researches have been evidencing the existence of environmental debates in other countries in the same period. The origins of the environment thought is not related only to the consequences of the great urban-industrial transformations that initiated in Europe in the end of the XVIII Century, but also with other former processes, among which Pádua (idem) emphasizes the European colonial expansion and the incorporation of large regions of the planet into a world-economy under its dominance, including biomes and ecosystems that were not part of the western historical experience.

For Pádua (2002), all of these resulted in the deep transformation of the world, its structures and landscapes, including subjective aspects. The massive exploitation of the natural world in the Americas, Asia and Africa had an ecological impact. The emergence of universal naturalism and geography allowed the reflexive identification of

[5] Pádua's research on the environmental thought in Brazil from 1786-1888 found 150 texts that were written by about 50 authors. In this period of 102 years, these authors discussed the destruction of forests (focusing on the Atlantic forest), of soil erosion, depletion of mines, climate disequilibrium and their social consequences (Pádua 2002).

these impacts, and resulted in critical views about them. Pádua (2002) connects his study with the ones by Richard Grove about the origins of the modern environmental critical thought. According to these studies the beginning of a more intense and broad perception of the environmental problem especially from the XVIII Century on, happened in the European colonies in the tropics. (Grove 1990 apud Pádua 2002).

Pádua (2002) argues that the environmental thought from the XVIII Century can be viewed as moments in the process of consciousness building about the environmental dilemmas in the modernity universe. These moments were able to enunciate a global political problem whose gravity only now has been perceived. In his perspective, the idea of a comparative vision of the natural environments in planetary scale is behind the intellectual developments that originated the ecological thought. Pádua (2002) points that the constant exchange of information among intellectuals and science academies in Europe and other regions configured a privileged space for these developments.

This exchange was part of the creation dynamics of a science that intended to be universal. In this context, *the studies of intellectuals who worked in the colonial and post-colonial periphery acquire a new visibility and a perceptive preeminence*. According to Pádua (2002:30), what is more important is not if the origins of the environmentalism are colonial or European, because the intellectual exchanges were so regular that make it impossible to establish a frontier between the poles*, it is that the evolution of the ecological consciousness should not be considered a exogenous, late and regressive response to the modern world*. On the contrary, *it should be seen as a result of this same world, something that resulted from modernity's historical planetary dynamics, a heir of its scientific revolutions*.

3.2 filling the horizontal gap

a. Socio-environmentalism and socio-biodiversity– cultural diversity, incorporating other forms of knowledge: beyond modernity?

As mentioned, socio-environmentalism brings together three principles: ecological sustainability, social justice and cultural diversity, implying participatory approaches to decision making. Consequently, the socio-environmental debates have brought to light issues related to worldviews, cultures and other forms of knowledge or the relation between traditional and scientific knowledge. Socio-biodiversity is a less well-known notion but it emerged from the social movements to express the idea that biodiversity emerges from the interaction society-nature[6].

The interplay of market dynamics, political institutions, conflicting policies and investments and economic, environmental, and their social consequences has resulted in

[6] More recent debates around the world have focused on the idea of of "biocultural diversity." Ethnobiologists introduced this concept to inextricably link the variation within ecological systems to cultural and linguistic differences.(Martin et al. 2012)

what was characterized as crisis of modernization in the Amazon (D' Incao and Silveira 1994). In the presentation of the book *Amazonia and the Crisis of Modernization* (idem), Lisboa states that the construction of the Belém-Brasília highway took the Amazon away from the territorial isolation, and through the road more modernization concepts entered the region in the 1960s. Changes that were understood as modernization (progress) were implemented without social participation. In Lisboa's view, this model has failed, as an exogenous, authoritarian and "developmentalist" project that ignored local societies, did not provide improvement in life quality and brought more environmental depletion, as deforestation, biodiversity loss, water pollution and climate change.

During the democratic transition, these kinds of development projects started to be questioned by the social movements, which demanded more participation. In parallel, the global conservationism also started to change their approaches. Jeanrenaud (2002, pp.15-17 apud Inoue and Prado 2007) argued that the shift of the global conservationist thinking was based on an instrumental approach to human populations, who were still seen as resources to achieve globally-identified conservation objectives. For that reason, alternative perspectives started emerging in the 1990s. While not ignoring science, these alternatives proposed that science should not try to produce a single, definitive set of objective laws about the environment, nor about how to define environmental problems and solutions.

One of the impacts of these new perspectives has been to "deconstruct" (or deglobalize) old concepts about nature and about environmental problems and solutions. This means that nature conservation is more than a scientific issue and that, in the midst of uncertainties, the best path is to expand the number of participants in decision-making, thereby making more room in the debate for a wider range of values and interests. This has meant incorporating the promotion of human rights as an objective in its own right. Participatory approaches have thus gained strength, seeking local definitions for environmental problems and solutions, and promoting the role of traditional knowledge and of resource management for local needs. (Jeanrenaud 2002 apud Inoue and Prado 2007).

Pádua (2012) states that Brazilian intellectuals and social movements have been using the concepts of socio-environmentalism and socio-biodiversity to emphasize the links between natural diversity and the diversity of local cultures inside the territory. Socio-biodiversity is an expression that emerged in the early 1990s, as a result of the political mobilization around the elaboration and negotiation of the Convention on Biological Diversity (CBD)[7]. Besides being considered rich in biodiversity, Brazil is considered a "mega-sociodiversity" country (Kaingang 2006).

[7]During the Convention negotiation process, tensions and differences were driven mostly by questions of ownership of and intellectual property rights of genetic material and biotechnology. The issue behind such tensions reflects the fact that biodiversity is not evenly distributed on Earth. In the end, despite the efforts of USA in one side and Malaysia in the other, the countries reached a compromise (Inoue 2007).

The socio-environmental movement has constructed this idea to intrinsically relate the diversity of populations and cultures to the existence of biodiversity. Referring to the CBD that speaks of indigenous populations and local communities, Kaingang (2006), asserts that such terms congregate an enormous social diversity into a single concept. To say local communities in Brazil means rubber tappers, extractivists, riverine peoples, seaside peoples, *andirobeiras*, fishers, coconut collectors (Babaçu coconut) and so on. Indigenous populations in Brazil refers to an universe of 230 peoples with their own cultures, languages, social organizations and legal systems, as recognized by the Brazilian Federal Constitution, that is an infinite socio-diversity, that, in her perspective, should not allow this convergence under a single concept. This sociodiversity conditions the existence of megabiodiversity (Kaingang 2006).

Participation of indigenous-right NGOs and of local populations has, therefore, resulted in more debates about the role of traditional and other forms of knowledge.

According to Kaingang (2006), in Brazil, there are about 230 societies in which information passed on from one generation to another. This happens among the same people or among different indigenous peoples. Each people have its land, tradition and knowledge.

In the context of the Convention on Biological Diversity, there have been extensive debates about traditional knowledge. Kaingang (2006) argues that to create databases to register that knowledge violates the oral traditions of many indigenous peoples, besides, traditional knowledge is not stagnant, it is dynamic, it is revitalized everyday. Consequently, traditional knowledge cannot be divided and put into small boxes. While an alternative to protect traditional knowledge has not been developed, it is important to highlight that protecting shamans' knowledge through patents, the body painting of indigenous peoples as industrial design, the name of the indigenous peoples as marks, the rituals as registration in the book of celebrations, and lands and traditional waters under the form of mankind's natural heritage can be viewed as a representation of a segmented world view, or a square world.

> While our knowledge is much more extensive, it includes many more values that not always fit into a piece paper, a germplasm bank or a database (…) Ailton Krenak questioned (…) who said that you can access my traditional knowledge? Who said I want you to share the benefits of an access to which I still have not consented? (…) (Kaingang 2006).

The unsolved relation between access to genetic resources, science, biotechnology and traditional knowledge is more than an issue of benefit sharing and the patenting system. Elements of nature can be recombined and appropriated through patents, as a result of research and the alliance between technoscience and capital. It is claimed that there are no interests in patenting traditional knowledge. However, as Santos (2006), asserts, it is necessary to access that knowledge because of the shortcut it represents in time of research. Traditional knowledge can help to get straight to the point, instead of wasting time in random prospection of genetic resources. Santos (idem) argues that what is offered in exchange, that is "benefit sharing" represents a huge discrepancy between the value attributed to the technoscientific knowledge and the low value

attributed to other types of knowledge. In his view, the problem is that contemporary science does not recognize the legacy of the past, and considers itself better, and split away from the past, which is an ignorant attitude even from the scientific point of view.

Santos (2006) mentions the anthropological studies by Narby (1999) with *ayahuasca* in Peru that found that through Shaman's visions, structures appeared which in the scientific language are called molecular structures, and the structures of DNA which are produced by computers' software as visualizations of what is the minimum required component of any living matter, appeared in Shamans' visions as the image of a serpent which communicated with them. Thus, Narby (1999 apud Santos 2006) concluded that the problem is not the opposition between one type of knowledge and the other but that, maybe, the scientists have not yet understood that there are people who not only did not follow the western way, but also did change and evolved in history. As Santos (Santos 2006:200) states

> *I find it very pretentious to think that only we in the West, developed, progressed and managed to have this fantastic modern science and that the others who did not choose that way remained in the past. What if they did not really remain in the past? What if they decided to develop in another way, different from ours? And what if we are now getting to the point where, through our methods, we begin to decipher the language by which, through other methods, the Shaman hear the plants? There is a point of convergence here (...) a possibility of contact and dialogue (...) the narrowness of contemporary scientific thinking therefore resides in destroying the prospects of dialogue with these peoples who might have different ways of accessing information.*

In conclusion, Santos (Santos 2006) argues that there is a common ground of understanding between traditional and contemporary knowledge because both establish a dialogue with nature. The shamans search for answers for the community, a solution for a problem. Technology can also be viewed as a dialogue between humans and nature in order to solve a problem. For Santos (Santos 2006), it is the same in different dimensions, in different ways. So the question is why only one kind of knowledge has a value? The problem lies in the incapacity of recognizing the value of a type of knowledge that is not scientific but which could still have interesting interaction with S&T, representing an advancement factor for both. Thus, the recognition of traditional knowledge can deliver benefits for everyone.

b. The environment, governance and IR dialogues – beyond modernity

Santo´s argument is consistent with Leis proposal regarding the relation between modernity, social processes and the governance of environmental issues. As stated before, Leis (1999:47) assumes there should be a redefinition of civilization, a project, which he calls realist-utopian. That project is based on the ample spectrum of

environmental theories and practices and it is called realist-utopian, because it can only happened bridging and nearing opposite phenomena, or the harmonization of spiritual and material experiences, reconciliation of the transcendent and immanent plans. *Making Dalai Lama, Madonna, Ilya Prigogine and Bill Gates to meet to talk about the state of the planet*. For Leis, environmentalism should be realist-utopian because it should be an open project, and in this sense, non-modern, outside of a linear view of history, which considers the forces that move history through a one-dimensional perspective.

In order to truly incorporate the environment challenge, IR and the social needed to change their anthropocentric premises to:

a) the biosphere is the basis of social life, and the human species is only one of many species that live interdependently there

b) social action frequently produces unexpected results on the environment

c) as nature and its resources are finite there are physical and biological limits for economic growth and human society expansion (Catton Jr, WR and Dunlap 1978, apud Leis, 1999: 92-93)

Thus, human beings and human societies cannot be considered apart from nature. As Leis asserts *the relation society-nature cannot be transformed into something passive to be controlled by science, forgetting its wild, unpredictable, and non-rational side, and, as such, uncontrollable* (Leis 1999:141). Today, the notions of planetary boundaries and the demands of sustainability evidence that the idea of conquest of nature is obsolete, and that, instead the relations society-nature should be reconstructed, re-organizing the way we produce, consume, and relate to each other as groups and individuals. In the epistemological and theoretical levels, it means looking for other ways of conceiving knowledge, or broadening our notion of knowledge.

Final considerations

The realization that many local initiatives are in accordance to global objectives carried out by international organizations and NGOs can be seen as evidences of globalization, or global processes like the development of networks of activists or of specialists, that spread principled or causal ideas[8].

The global environmental governance literature points to the rise of NGOs and individuals as actors in the world political arena, to the international and transnational transfer of funds and knowledge towards biodiversity protection, and others. However, we should look at them in a more dynamic and interactive way. As Tickner and Blaney (2012:12) argue, we should look for how concepts get rearticulated in different parts of the world as *everything gets inflected locally*.

[8] For the concept of network see Keck and Sikkink 1998.

In a world that is in environmental distress, there is growing need for efficient and equitable responses - that is the great challenge for social sciences in the 21st century: the governance of the Anthropocene. In this chapter we have identified two main limitations of current IR narratives regarding the environment: the lack of flexibility to assimilate that effective governance is possible beyond the limits of the Nation-state and the obsolete dependence on the "modernity project" that neglects outside epistemologies and ontologies. To fill in these gaps we call for vertical and horizontal dialogues.

Even though global-local and inter-ontologies interactions imply risks of co-option and domination[9], we claim that Amazonian socio-environmentalism has evolved as a potential bridge between developments in the global level of environmental governance and local populations, as well as different worldviews. Without the transnational networks, it would have been very difficult for local movements like the Lake Preservation Movement of Mamirauá, or Rubber Tapper Movement of Acre to go globally. In both cases, the national or subnational governments did not provide channels for their demands, neither there were other open possibilities for improving welfare and social justice. Furthermore, if, on one hand, there is the possibility of these initiatives being only instrumental strategic alliances between environmental NGOs and local grassroots movements, on the other, it is also possible to view experiences like Mamirauá, or the rubber tapper movements, as attempts to "deconstruct" (or deglobalize) old concepts about nature and about environmental problems and solutions (Jeanrenaud 2002), and re-conceptualizing "environmentalism" as "socio-environmentalism", in the sense of local participation and the convergence of principles like ecological sustainability, social justice and cultural diversity.

In the Amazon, socio-biodiversity has implied the construction of participatory approaches that seek for local definitions for environmental problems and solutions, and promotion of the role of traditional knowledge and of resource management for local needs (Jeanrenaud 2002). At the local level, the programs, projects and initiatives by a myriad of actors have evidenced this socio-environmental character and have the potential to contribute with innovative ways to re-construct the relations between societies and nature. In relation to Earth System governance, such experiences can also be viewed as multilevel and multi-actor ways to construct governance from local to global that go beyond the North-South divide that dominates the multilateral negotiation arenas and has hampered advances among nation states.

[9] The sources of environmental destruction in the Amazon can also be linked to global dynamics. The countries in the region have been pushed by global market forces and their elites to privilege economics in detriment of the environment. Deforestation, loss of socio and biodiversity and water pollution have been driven by economic activities such as agriculture (e.g. cattle ranching soybean harvesting), mining, and infrastructure building (hydroelectric dams, roads and hydroways).

Socio-environmentalism and socio-biodiversity have been notions that have framed global environmental politics in Brazil. These notions represent the convergence of values related to ecological sustainability, social justice and cultural diversity and a demand for participation in decision making not only the in local, but also in the national and global levels. Thus, cultural diversity is seen as intrinsic to socio-environmentalism. The participation of local populations also make sense because their considerable knowledge of flora and fauna together with the sustainable management and use of these resources. They have been historically using such resources in a more sustainable way. Moreover, local communities' and indigenous peoples' traditional *knowledges* have been said to be non-dualist (or less dualist) concerning society-nature, as well as, enabled to perceive other dimensions of reality beyond western rationality (Narby 1999, Albert 2002, Kopenawa and Albert 2013). To look for the bridges between the global and the local means also recognizing that such interaction is paradoxically constructed in a way in which disempowerment and empowerment can be two faces of same coin (globalization), what varies and makes the difference is how the social relations and networks are constructed. As the global-local initiatives in field have evidenced there is room for learning and re-conceptualizing so, perhaps, there is room for bridging the gaps between traditional and contemporary knowledge systems.

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