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**The Paradox of Poverty in Rich Ecosystems:
Impoverishment and Development in the Amazon of
Brazil and Bolivia. Ioris, A.A.R.**

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The Paradox of Poverty in Rich Ecosystems: Impoverishment and Development in the Amazon of Brazil and Bolivia

Abstract: The article offers an examination of poverty and development in the Amazon, moving beyond the conventional view which places the blame on infrastructure deficiencies, economic isolation or institutional failures. It examines synergistically connected processes that form the persistent poverty-making geography of the Amazon region. The discussion is based on qualitative research conducted in two emblematic areas in Bolivia (Pando) and Brazil (Pará). The immediate and long-term causes of socioeconomic problems have been reinterpreted through a politico-ecological perspective required to investigate the apparent paradox of impoverished areas within rich ecosystems and abundant territorial resources. Empirical results demonstrate that, first, development is enacted through the exercise of hegemony over the entirety of socioculture and, second, because poverty is the lasting materiality of development it cannot be alleviated through conventional mechanisms of economic growth based on sociocultural hegemony. The main conclusion is that overcoming the imprint of poverty on Amazonian ecosystem entails a radical socioecological reaction. Additionally, the multiple and legitimate demands of low income groups do not start from a state of hopeless destitution, but from a position of strength provided by their interaction with the forest ecosystems and with other comparable groups in the Amazon and elsewhere.

A poverty-making geography

The existence and persistence of poverty is one of the most disturbing contradictions of emerging markets and regions experiencing fast economic growth. Sustained rates of economic development – for example, by the BRICS countries in the last decade – have not been enough to guarantee the amelioration of the living conditions of large proportion of the low-income population (Gaiha *et al.* 2012; Goldstein 2013; Power 2012). Particularly in a situation of uneven access to resources, rigid social institutions and a highly asymmetric balance of power, the process of development leaves some groups, often the majority of the inhabitants, clearly behind those who are in control of the economy and the apparatus of the state. The problem is even more serious when development is achieved at the expense of the ecological systems that directly support most poor families, as in the case of the recent experience in the Amazon region (Guedes *et al.* 2012). Livelihoods, forest ecosystems and group identities are all under threat from the consequences of mainstream development and alterations happening at local and regional scales (Bicalho and Hoefle 2010; Gomes *et al.* 2012; Hecht 2011). Development policies have demanded an intensified exploitation of minerals, timber, water, biodiversity, etc., as well as the expansion of plantation farms and the construction of gigantic dams (Diversi 2014). In particular, the agribusiness sector has converted vast tracts of the Amazon into cattle ranches, soybean farms and sprawling agro-

industrial towns, whereas most of the regional population have benefited little from the belated insertion of the Amazon in national and international development agendas.

Despite the multifaceted complexity of poverty and the politicised basis of socioecological change, most poverty alleviation schemes today are still based on a normative perspective (Mawdsley 2007) anchored on the imperative of economic growth (Peck 2011) and on the need for stable government arrangements (Ferguson 2007). Poverty conditions which do not conform to pre-established policy headings tend to be overlooked and subsequently removed from policy networks. However, poverty – defined as a condition of unsatisfied material and sociopolitical needs caused by combined mechanisms of exploitation, alienation and exclusion – cannot be seen as merely the result of bad production practices or the failure of deprived groups to join process of development (as typically described in official documents and mainstream interpretations). On the contrary, poverty is development-induced scarcity (Yapa 1993) that is experienced by deprived groups in spatial and socioecological terms (Gordillo 2004). It arises from the selective dismissal of some practices and the emphasis on other economic activities and opportunities situated in specific time and space settings (Lawson *et al.* 2010). Therefore, it is possible to talk about a poverty-making geography in which the production of space carries on the inequalities and injustices related to the capitalist process of development. In the specific circumstances of the Amazon, poverty has been an integral component of the economic transformation initiated in the latter half of the last century designed for the exploration of territorial resources and the intensified export of goods and commodities. Policy instruments (such as credit, subsidies and the granting of private land property) and infrastructure investments (in the form of roads, ports, and warehouses) attracted different contingents of people, who together with those already living in the region have only marginally gained from the process of development.

The aim of the present article is to go beyond the conventional blame on economic deficiencies or the inadequacy of existing governance approaches in order to offer a critical interpretation of the complexity of the phenomenon of poverty amid rich ecosystems and abundant natural resources. The paper will discuss some key aspects of the peculiar situation of two impoverished areas in the Amazon of Bolivia and Brazil. Making use of the experience of several local communities, the discussion will question the wider process of regional development, social welfare and environmental policy-making. The starting point is to understand the Amazon River Basin as a vast territory that is simultaneously social and natural, that is, inherently socionatural. The region is the product of multiple trajectories of both ‘society’ and ‘nature’ co-evolving

together in permanent interrelation and in constant transformation (it is worth mentioning, for example, the ancestral practice of lagoon construction by indigenous groups to regulate the flow and flooding of Amazonian rivers). These are deeply contested relationships, in which the interactions between society and (the rest of) socationature bring the imprint of old and new forms of injustice and reshape landscapes according to the balance of political power. Poverty and affluence are metabolised through the appropriation and change of forest ecosystems and of also the regional space. Before moving to the examination of the empirical results and main findings of the research, the following section will first describe the study areas and the methodological and interpretative approaches.

Study areas, methodological approach and conceptualisation of the research

The current examination of the causes and reactions to poverty is based on qualitative geographical research conducted in two areas: the Pando Department (around the city of Cobija) in Bolivia and the State of Pará (around the city of Santarém) in Brazil (Figure 1). Pando, in the northern, tropical part of Bolivia, is the least populous Bolivian state with serious levels of extreme poverty affecting around 35% of its inhabitants (UDAPE-PNUD 2010). Pando has significant areas of upland forests with relatively low deforestation rates, but which have recently been subject to increased forest clearance and the expansion of commercial agriculture. The government has stimulated poor peasants to move from the Bolivian mountains to the Department of Pando, which has created tensions between old and new forest dwellers (i.e. poor-poor disputes). Local problems in Pando reflect the national trend of economic growth for more than three decades (1976-2007) that has been greatly spoiled by the persistence of structural inequalities (PNUD 2010). Since 2006, with the election of President Morales, the national government has taken an alleged 'revolutionary' political turn and attempted to redistribute resources and economic outputs across the wider population (Linera 2012). But the translation of the new discourse into the concrete improvement of people's lives is still to be demonstrated and the government has often been attacked for its excessive pragmatism when dealing with business sectors in exchange for political acceptance and governability (Zibechi 2009).

The second study area in the State of Pará is also at the frontier of regional development and has a tense history of deforestation, population migration and multiple forms of conflict. Land disputes, violence and scarcity result from power struggles over the region's abundant resources

(Simmons 2004). Socioecological tensions have been particularly relevant in relation to activities such as agribusiness production, cattle ranching, dam construction and rapid urban growth. As in other parts of Brazil, poverty has declined in Pará in recent years due to national economic expansion and, crucially, compensatory cash transfer mechanisms introduced by the federal government (IPEA 2010). However, peasants and small farmers have benefited comparatively much less from the overall process of development (Steward 2007). In order to reduce absolute poverty (i.e. per capita income of less than ½ of minimum legal salary) and eradicate extreme poverty (i.e. less than ¼), Pará would have to reduce poverty by 2.2% per year between 2009 and 2016 (IPEA 2010). Likewise, official statistics show a decline in poverty in Santarém from 59.50% (in 1991) to 31.07% (in 2010), but inequality (in terms of the Gini coefficient) increased in the same period (PNUD 2013).

[Figure 1 about here]

The present investigation combined various sources of data and research strategies to allow the reinterpretation of poverty from a political economy and, more specifically, a political ecology perspective. It involved the systematic examination of the interconnections between the condition of socionatural systems and the everyday experiences of hardship, collaboration and resistance by the communities under study. The study followed a participatory action research approach, that is, using collaborative and engaged research oriented towards social change (Kindon *et al.* 2010). Research methods included 119 semi-structured interviews in the two countries (anonymously mentioned in the text by the sequence number and location), participant observation, analysis of documents and public policies, and two regional workshops. It particularly entailed sustained interaction with residents in and around the city of Cobija and in the extractive reserve (RESEX) near Santarém (this is a type of conservation unit where subsistence and extractive practices are allowed and encouraged; it was established after persistent political campaigning and contains more than 20,000 residents and 72 communities (of which around a third were visited during the research campaign)). Interview questions were organised under six main themes: life trajectory, understanding poverty, relationship with the forest, impact of government and anti-poverty programmes, political mobilisation and coping strategies. Interviews were translated from Spanish and Portuguese into English and then analysed using NVivo coding.

A decisive element of the research was the commitment to give voice to forest-dependent poor in order to articulate their concerns over degradation and deforestation. Likewise, the project intended to bring together forest-dependent poor, policy-makers, NGOs and other social groups to jointly identify key issues pertaining to the case study areas. This inclusive approach was informed by a range of geographical and non-geographical reinterpretations of the complexity and the ramifications of poverty. Poverty-related issues are certainly highly heterogeneous and required an adequate treatment able to uncover the variegated practices, needs and experiences of disadvantaged people and material conditions had to be analysed according to specific spatial arrangements, cultural knowledge, skills and social values (Lin and Harris 2010). The research also called for new theoretical and methodological strategies able to embrace the human and the more-than-human dimensions of poverty, as well as the materiality and the symbolism of poverty. Nonetheless, as observed by Bakker (2010), the socionatural configuration of the world (including the human and the more-than-human dimensions of a unified, dynamic reality) is still difficult to handle with the frameworks normally used. In the present study, the response was to place the relationships between people, things and processes as central to the analysis. The research findings, examined next, derived from the application of this relational framework. In the final part, the conclusions will be focused around the political reactions to poverty as a process that is also necessarily socioecological.

Development as hegemony over socionature

As already mentioned above, development is a highly complex phenomenon that, particularly in such as huge region, cannot be interpreted in black or white terms, but one should be able to recognise specific advances and setbacks associated with the development as a lived geographical experience. Nonetheless, most academic examinations so far have been very insular and lacked a more thorough historico-geographical perspective of the process of development in the Amazon, especially failing to link the politics of economic growth with its myriad effects at different scales and across society and the rests of socionature (e.g. Barrett *et al.* 2011; Minang and van Noordwijk 2013; Vadez *et al.* 2008). The importance of the multiple and complex relationships between society and the rest of socionature is often missed in these analyses of development. In other words, the process of development does not rely on the separate, discrete control of people and territorial resources, understood as individual or unconnected relationships.

On the contrary, regional development in the Amazon has been promoted from a perspective of hegemony over the entirety of socationature (including the human and the more-than-human dimensions) and always with the purpose of commanding and containing socationatural change. The exercise of hegemony is considered here in the Gramscian sense, as a geographical project that transforms spatial divides from the standpoint of the stronger sectors of society (Kipfer 2012). Socationatural hegemony is primarily achieved through ideological, discursive and material practices of the state and of strong socioeconomic groups, which lead to the appropriation and transformation of socationatural relationships according to their own priorities and interests.

It means that development in the Amazon is an intrinsically politico-ecological phenomenon that requires renewed forms of authority over multiscale socationatural interactions in way that has allowed the imposition of rules and property relations across far-flung areas. Ever since the early days of European colonisation, the Amazon region has been connected to global markets through the joint appropriation of territorial resources (Ioris 2007), the transformation of ecosystems (Aldrich *et al.* 2012) and the violence exerted against indigenous inhabitants (Vadjunec *et al.* 2009). Economic activity intensified significantly since the 1960s, when a series of national development programmes were adopted by the Brazilian military dictatorship as part of the reaction against social reforms (Hecht 2005). The Amazon was then seen as an economic frontier and a suitable destination for poor peasants and landless farmers causing ‘problems’ elsewhere in the country (Kirby *et al.* 2006). The intention was to replicate the technological, institutional and economic dimensions of the mainstream model of international development put forward in the post-World War II decades (Peet and Hartwick 2009). Even more than before, the accumulation of wealth in the recent past relied on the dissolution of cultural and ethnical identities and the reduction of socioecological complexity to the sphere of market transactions. From being a remote land of exuberant biological formations that fascinated explorers for many centuries, the Amazon was brought to the centre of national and transnational development policies. And further integration of the region with the rest of the Brazilian and Bolivian national economies has increasingly required and perpetuated the hegemonic control of socationatural systems.

Therefore, in contrast to the critique often raised by most NGOs and environmental groups, the Amazonian process of development is not inherently anti-ecological or against the forest (i.e. in the sense that it necessarily demands the destruction of forest ecosystems and the replacement with radically different landscapes). On the contrary, development directly depends on territorial resources and rich ecosystems, and it is the availability of land and labour directly fuels the

expectations of rapid capital accumulation by cattle ranchers, agribusiness, miners, loggers, construction companies, dam operators, etc. (Weinhold *et al.* 2013). The most fundamental contradictions of development are not simply ecological, but entirely socionatural, that is, the process of development demands the double and simultaneous control and exploitation of the human and non-human dimensions of the Amazon region. The most important consequence is that poverty and sociopolitical exclusion is maintained by hegemonic socionatural practices. With the advance of development, Amazonian ecosystems are increasingly transformed according to new economic activities that mobilise resources and people for the accumulation and export of capital, despite socioecological tensions and poverty trends. The region is now firmly at the edge of the advance of Western modernity over new territories, peoples and ecosystems previously beyond the reach of mass markets.

The same governments that introduce environmental legislation and establish nature reserves constantly formulate economic incentives and construct roads and infrastructure that lead to further land concentration and aggravate land conflicts (Simmons *et al.* 2007). In that process, socionatural relations have been brutally altered (in material and symbolic terms) and the devastating impacts of development become evident, for example, in the growing erosion of communal practices and complex relationships with forest ecosystems. The perverse consequences of the political hegemony established over socionature became evident, for example, in discussions with residents of the extractive reserve in Pará during visits and workshops (see above for the methodological approach). The locals argued that their life improved after the establishment of RESEX, given that it reduced the pressure of neighbouring timber and mining companies. It means that, to some extent, in the space of the reserve the hegemony of development is temporarily contained and the locals have better opportunities to sustain meaningful socionatural relationships. However, recent victories seem increasingly secondary when considering the still strong and mounting pressures of the economic development agenda, which may affect the existence of the extractive reserve in the long term.

The exercise of hegemony, especially following external politico-economic priorities championed by the national states, is a highly contradictory process. Because development is pursued from a hegemonic perspective of power and the pursuit of immediate results, it is fraught with socionatural contradictions that, inevitably, end up affecting the socionatural basis of economic growth. The conventional platform of development is commonly endorsed for the Amazon on the assumption that the region has almost inexhaustible territorial resources that can

be easily converted into profits, taxes and prestige, while ignoring that scarcity and abundance are relative and highly contested terms in the Amazon (Schmink and Wood 1992). The same process of development that creates a mirage of abundance is responsible for a sudden generation of scarcity, particularly through the seizure of large tracts of land by cattle ranchers and agribusiness farmers (Hecht 2005). The result is the absurdity of a growing scarcity of water in recent years in the middle of the largest river basin in the world, as experienced by local residents:

“We need plenty of things here. Water, we need water. Because before... now in the summer, this thing with a very long, hot summer. Look where the water is, over there, almost over the other side” (#41, female, Pará)

Or the lack of wood in the largest rainforest:

“Today for us to use the wood, there isn’t much. It’s hard to find wood. Not much wood and what there is, is very green. They have taken the best part. So what I do is cut out a few fields, but not big ones. If you compare what they take out and what we do. And also I regret what happened further up the river. That timber merchant that cuts down so much wood. We see the ferries go pass.” (#48, male, Pará)

The contradictory exercise of hegemony over socationature for the purposes of development has influenced not only economic trends and the allocation of resources, but even affected contemporary environmental conservation policies aimed at mitigating the impacts of development activities such as cattle ranching, soybean production and mining. The official reaction to those problems comes in the form of regulatory controls and incentives that end up reinforcing anthropocentric worldviews, as in the particular case of market-based solutions such as the payment for ecosystem services (PES), which is one of the main policy instruments advertised and offered to the Amazon population (especially by the Brazilian government, although the Bolivian administration has also expressed some silent sympathy). In our discussions, it was evident that community leaders and NGO members are aware of the intention to adopt PES schemes as a central policy tool.

PES is certainly a key concept of environmental management currently, especially because it seems to convey the idea that ecosystems are socially valuable and in ways that may not be immediately intuited (Daily 1997). In the Amazon, PES has been increasingly advocated as an alternative to slash-and-burn agriculture by compensating farmers for including forest conservation that guarantees water provision, carbon sequestration and biodiversity (Ioris 2010). In theory, PES could provide the necessary bridge between the ecological and social dimensions

of Latin American ecosystems (The Economist 2014). In practice, however, this is an instrument that reproduces the dichotomy between nature and society promoted through Western economy, technology and planning (as analysed by Worster 1994). The notion of ecosystem services entails a profound depoliticisation of both social demands (which are described as homogenous across groups and automatically justified, that is, without considerations of the patterns of consumption and distribution of goods and services) and of ecological conservation (given that the impact on ecosystems, which reduces the provision of ecosystem services, is typically described as the result of human action in abstract, with no acknowledgement of asymmetric responsibilities). It implies an emphasis on the notion of ‘services’ supposedly provided to humans and, consequently, directly excludes the possibility of a more integrative, relational perspective (Boelens *et al.* 2014). In other words, humans are portrayed at the receiving end of services available to satisfy socioeconomic needs.

The adoption of PES schemes works through the denial of the socionatural ontology that is the product of long-term interactions between humans and non-humans. In practice, market-based responses are an adjunct of the private appropriation of the commons and of the expansion of development institutions over socionatural systems (Lansing 2013). As a result, ecosystems are detached from their long process of socionatural evolution and become the static and passive providers of services. Attempt to impose environmental conservation strategies through the language of money, as in the case of PES, could only produce short-lived results and reinforce the same hegemony that produced socionatural degradation in the first place (Van Hecken and Bastiaensen 2010). The commodification of such ‘ecosystem services’ is part of the new social order based on successive abstractions and is comparable to the capitalist transformation by which individual human labour becomes social labour (Robertson 2012). Whereas, in actuality the poor rely on the local ecosystems not because of the supposed ‘services’ that they provide, but because ecosystems are part of their survival strategies. The everyday life in the Amazon involves the creation of a very complex set of relations, in which peoples actively reconstruct their identities and help to reshape the physical and political landscape throughout the region (Vadjunec *et al.* 2009).

From the above, it is not difficult to recognise that the hegemonic process of development in the Amazon has favoured certain politico-economic goals and aimed to remove what is perceived by most politicians as obsolete, inadequate and out of place. Even inventive responses to mounting environmental degradation, as in the case of PES, normally operate within the same

epistemic framework and rely on the control of socionatural relationships. From the perspective of those with the lion's share of regional development – mining and construction companies, and especially the agribusiness sector – the poor should associate themselves with an ongoing, already defined process of economic growth and modernisation (Pacheco 2006). The demands of low-income groups, the request that ecosystems are preserved or restored, and pleas for more transparent and inclusive public administration are considered 'inconvenient' distractions to mainstream development plans (e.g. the discourse of Senator Kátia Abreu, president of the National Confederation of Agriculture, in 2013). Furthermore, it is highly significant that the denial to the poor of any decisive role corresponds to the beleaguered place of forest ecosystems in regional development strategies. Development in the Amazon is, therefore, a politico-ecological project that happens through the imposition of a hegemonic rationality of economic growth and private accumulation over both society and the rest of socionature. This corresponds to the expected political passivity of the poor in the process of development as promoted around the world (Gray and Moseley 2005). Because poverty is the most perennial materiality of development, any effort to alleviate poverty *through* development is inevitably undermined and end up reinforcing the perverse situation of hegemony over socionature, as discussed next.

The materiality of development undermining the possibility of poverty alleviation

Because development is reliant on the perpetuation of hegemony over socionatural relations, old and new government approaches to poverty reduction, in both Bolivia and in Brazil, have revealed a perennial incompatibility with the material, cultural and political demands of the wider sectors of the Amazon society and their unique socionatural condition. In a situation of fierce hegemony over socionature required for the purposes of regional development, poverty alleviation is promoted by government and multilateral programmes *in spite of* the forest and not considered *in relation to* forest ecosystems. There is in place a systematic attempt by development policy-makers and practitioners to rescue impoverished social groups and incorporate them – as subordinate players – in economic activities imposed from the outside on the Amazonian ecosystems. Most poverty-alleviation approaches place the forest in a distant position from people, which is certainly not unrelated to the intentional depoliticisation of low income groups vis-à-vis mainstream economic development goals. On the contrary, the ideological separation of local residents from their socionatural condition that characterised most public schemes is an integral

part of the political intention to reinforce hegemony. From the perspective of public agencies, the best case scenario that the poor can hope for is a combination of government concessions and subordinate participation in aggregate economic results. This operates in striking contrast to the largely communal and socionatural world-view of the locals (including elements of cross-generational benefits and responsibilities), for example:

“We are working here on a small project with plants so we can reforest the areas that have already been damaged. These are projects that start but don’t have that support [from public agencies]. *Even the trees are the owners of the land*, you know? So, the project starts and they say, look here are some plants, now get on with it. (...) They leave you on your own. So we have to get on with planting and looking after everything... *We know it’s not so much for us, it’s more the environment that will gain from this. But then other people will gain something from this, after we rebuild what man has destroyed. But until it has all come back, we won’t be around anymore.* But we want to plant, to help out so that future generations when they come past here they can see that a lot of people at least.” (interview #47, male, Pará) (emphasis added)

Also the following statement from someone living in a rural community in the Amazon indicates the paradox of poverty amid a situation of rich ecosystems and abundant resources and, in particular, the distance between the approaches taken by the public sector and grassroots demands:

“Even in this poverty that we live in, the forest gives us lots of things. A lot of the riches that are there we can use. We can pick the fruit... but there is a problem with poverty, as they say, which is the government’s plans. Our government doesn’t look out for us, and these ‘capitalists’ don’t help us. So that really affects us because we need a lot of things in our region because we suffer, but not because of the forest, more because of our health, education, which we need here. Because we need help in the area of health and education. If the government paid us more attention... we are not poor, we just have a low income. If the government paid more attention we could improve things. And get better in the future, because the government is really...” (#6, female, Pará)

The incomprehensibility of the unique socionatural reality of the Amazon, and how it plays a fundamental role in the life of humans, was long ago demonstrated by the words of Cunha (2005, 4) when, after an official and historically important expedition to the borders between Bolivia, Peru and Brazil in 1909, claimed that “man, there, is still an impertinent intruder”. In more recent decades, poverty is still seen by public offices and international agencies as something predetermined in advance and unconnected with the daily socionatural interactions with forest ecosystems. Official polices regularly ignore that human actions happen within ecosystems and are shaped by the accumulated interactions and past experiences between humans and non-

humans. For instance, whereas subsistence farmers and forest dwellers are frequently led to clear land and explore the forest in order to survive (Coomes *et al.* 2011), their socionatural condition and technological approaches are perceived as the simultaneous expression of the richness of the forest and the need to exert self-restraint, as evident in this statement:

“Because you know we weren’t born to eat that much game and fish. God didn’t give it to us to eat it that much. (...) The poor don’t get by [only] if they don’t want to. But the forest gives them everything, and comforts them with its warm embrace.” (#42, male, Pará)

The latter quotation makes direct reference to the socionatural configuration of the world, whose long-term existence depends, first of all, on a responsible and self-restrained interaction with socionature. In many interviews it was declared that, rather than any artificial uncoupling, humans and non-humans are co-constituted and constantly re-create each other through inter-reliant socionatural relationships. This means a rejection of the conventional split between nature and society in favour of a hybrid configuration of the world that considers it simultaneously natural and social. By contrast, policies aimed at promoting development through forest and land management in Brazil and Bolivia have largely failed because of the ideological and procedural separation of the natural and social elements of socionatural systems. Even supposedly improved responses – such as the recommendations of UNEP (2003) that poverty reduction should happen through the sustainable management of ecosystems that is related to participative freedom, economic facilities, social opportunities, transparency and ecological security – remain largely embedded in the same ideological framework characterised by the passivity of socionature. That is evident when the discourse of sustainable forest management is hijacked by loggers, farmers and development agents to mould forestry governance and dictate how community-owned forest should be managed (Medina *et al.* 2009).

The muddling of sustainable development policies pervades not only poverty-alleviation interventions, but also the formulation of legislation aimed at ecological conservation. At the time of this research (2010-2011), both Brazil (with Lula and then Dilma) and Bolivia (with Morales) had populist administrations that insisted on the importance of a sustainable development of the Amazon but paradoxically promoted a growing exploitation of resources and intensive agribusiness. The aforementioned Bolivian vice-president García Linera (2012) specifically mentions the need to address poverty and promote development while at the same time preserving ecological systems, but simultaneously claims that the current development experience should

facilitate a convergence of the real geography of Bolivia with the ideal geography of the state. It was possible to observe during fieldwork in Bolivia that those living in the forest try to develop multiple strategies to escape poverty, but this is also constantly undermined by their growing connection and dependency on urban markets in the regional towns and cities.

An emblematic example of renewed hegemony undermining poverty alleviation is the Sustainable Amazon Plan (PAS in Portuguese) launched by the Brazilian government in 2008 with ambitious targets but suffering from the old vices of centralisation, populism and subordination to market rules (Souza and Filippi 2010). Although the motto of the administration of President Dilma Rousseff since 2011 has been *País Rico é País sem Pobreza* [A Rich Country is A Country without Poverty], the main reactions to poverty led by the Brazilian government are a series of short-lived mitigation schemes. Likewise, conditional cash transfer schemes (conditional because they require beneficiaries to fulfil specified conditions in order to continue receiving grants) were introduced in Brazil – called *Bolsa Família* – in order to help to alleviate poverty. Another programme was launched in 2011 for those working in extractive activities in the Brazilian Amazon (called Green Stipend) and promises around US\$ 150/month per family. Initiatives such as these may help to momentarily address the depth of poverty (at least while the government can fund it), but are part of the new heterogeneity of the post-neoliberal era that combines liberalised economics, behavioural changes and bolder social interventions (Ballard 2013). In the lower Tapajós River, it certainly increased the purchase capacity of people who previously had no regular source of income. Even so, it was possible to detect a clear criticism of the financial dependency and subtle discrimination promoted by the same programme:

“Although I receive it [*Bolsa Família*], I am against this family benefit. I would like the government to create public policies that benefited us as small farmers. A credit that is de-bureaucratized!! So we can have access to this credit.... For example, you receive R\$ 150 a month [US\$ 70], but that is only really enough for the children’s school materials. There are no other public policies in our favour.” (#11, female, Pará)

The main problem of most communities continues to be the question of land tenure that limits the ability of the poor to improve their activities and escape poverty. But the action of national governments strongly favours the establishment and reproduction of large estates and an export based economy (e.g. soybean production). The apparently positive experiences of rubber tappers in the Brazilian State of Acre and of other similar extractive industries (as the artisan production of many types of craft goods in the RESEX near Santarém) have suggested the

existence of viable economic alternatives to the conventional pathway of deforestation and production. At the same time, however, these are usually small scale solutions that produce only sporadic gains to the community:

“If people would come and buy our crafts... Or whatever we have to sell, because it’s not just crafts, it is flour, tapioca.... It would be good if, from time to time, a group of tourists could come and buy things. Because sometimes they come just for leisure. Sometimes they ask questions about things here, sometimes they look around but they don’t actually buy anything...” (#44, female, Pará)

However, the crucial problem with these localised and fragmented alternatives to the hegemonic process of development is that, on their own, they are unable to interrupt the overarching trend of poverty and marginalisation. These are certainly noteworthy initiatives informed by the discourse of sustainable development (enthusiastically supported by organisations and cooperatives in the Santarém and Cobija, in the case of this research) but have been largely valued by the customers for their exotic appearance and its connection with a vague desire for sustainability. For instance, the experience of several communities around Cobija highlights the gap between the actual management of the forest by those living close to the forest and the agroforestry approach incentivised by the national government. In our discussions, many complained that agroforestry systems require significant capital and specialised technologies that are beyond the reach of subsistence farmers. Examples like this one in Cobija show the codification of inequality and poverty into the environmental change associated with the very process of development in the Amazon. Overall, poverty is not only inbuilt in the prevailing model of economic growth, but it represents the most persistent materiality of the hegemony over socionature that pervades development. That is clearly revealed in the following interview quotation:

“I distrust current government policy [that is] pushing people to do agriculture and raise farm animals in four or five hectares, but they are going to lose their Brazil nuts and other trees. I would like not to have cattle ranchers in Bolpebra, only Brazil nuts and rubber farmers. We will keep our forest and all wild animals. To improve our lives we need carpentry and a bigger sawmill, so we can export wood furniture instead of logs. We do not want to do like companies that take big trucks of wood. (...) The company has extracted timber and they never have paid [us]. The worse thing is that they have destroyed streams, and many trees and saplings. It is like an injury in the forest. That’s what companies left while they cut timber. Companies are enemies of peasants.” (#11, male, Pando)

In the end, public policies by the Bolivian and Brazilian governments have played a key role in justifying the obstacles to address poverty inbuilt in the process of development. This

combination of factors suggests that overcoming the imprint of poverty on ecosystem entails a fundamentally socioecological reaction from the local to the regional and national scales of political interaction, which will bring us to the concluding part of this analysis.

Socioecological reactions to poverty-making: The way forward

The previous pages dealt with the peculiar, somehow paradoxical, situation of rich Amazonian ecosystems rife with poverty and under the pressure to develop rapidly and become more connected to other economic regions. The starting point was the recognition that poverty in the region is a situation of unfulfilled material and sociopolitical needs that directly derives from combined mechanisms of exploitation, alienation and exclusion associated with the perverse model of regional development. In order to unpack this complexity, fieldwork research was carried out in two emblematic areas of Brazil and Bolivia and followed an innovative politico-ecological approach that emphasised the ontological interdependencies between the human and more-than-human dimensions of an integral reality. That proved to be an adequate entry point into a socionatural, and highly politicised, condition.

The assessment of empirical results, informed by the academic and non-academic literature and making use of socioeconomic data, led to two main themes that represent main contributions to the academic literature. First, mainstream development has depended on the exercise of hegemony over the entirety of socionature (i.e. more than simply the exploitation of nature and the control of society, development requires coordinated socionatural transformations under the sphere of influence of politico-ecological hegemony). Second, while poverty is the most widespread and perennial materiality of development (i.e. the discernible mismatch between ephemeral economic gains and the lasting legacy of poverty due to socionatural degradation), the exercise of hegemony over socionature undermines the possibility of both poverty alleviation and environmental conservation. Those two fundamental, and synergistically connected, processes form the basis of a poverty-making geography that permeated the transformation of the Amazon region in recent decades, particularly in Bolivia and Brazil.

While some government initiatives and international collaboration have brought positive results to individuals and communities, as a whole, investments and assistance programmes failed to produce the desired outcomes in terms of addressing poverty through the valorisation of the socionatural features of the Amazon. Efforts to alleviate poverty and sustains the forest are

normally hampered by an overly simplistic representation of economic development and of the multiple scales across which drivers of poverty and environmental degradation operate. Likewise, approaches to forest management adopted under the canon of environmental governance have offered narrow, formalised solutions (e.g., payment for ecosystem services), which may be relevant to farmers and commercial land managers but are less relevant to the poor (Nebel *et al.* 2005). Such programmes are also blighted by limited structure and coherence, so that the lack of cross-institutional communication, gaps in implementation and fragmented delivery aggravates deforestation and perpetuated poverty. The poor are systematically stereotyped and assumed to be culturally backward and incapable of escaping poverty on their own. Their socioecological knowledge is mistrusted and their rights to economic activity are constrained by the political-economic shaping of environmental management.

Yet, for those suffering the consequences of development, poverty is never a single phenomenon but reflects the corrosion of socationature and the manifestations of other shortages and deprivations (including lack of real democracy and scarce social opportunities). Instead of a mere material condition, poverty is closely related with alienation, as significantly stated in one interview, “to be poor doesn’t mean lack of money, but poor in the sense of, closing your eyes” (#47, male, Pará). Different than the alleged passivity portrayed by official poverty alleviation schemes and wider poverty alleviation policies, subaltern groups are able to perceive and rise up against the negative trends of development from within their socioecological condition, as famously happened in the 1980s with the *seringueiro* movement led by Chico Mendes. The daily struggles for survival and political representation help to produce a variegated social space in which the connections between the forest and local communities provide the basis of survival and group identity (Adams *et al.* 2009). More importantly, rather than a reduction of the poor to a static condition of poverty, the everyday life in the Amazon involves a very complex set of relations that allow them to critically reflect and creatively resist through their close connection with forest ecosystems. Considering that the advance of development is the main source of socationatural transformation and that it has the imprint of poverty-making, the reaction needs to be positioned as a socioecological phenomenon in which the experience and the familiarity with the forest are of decisive assistance. As argued by Santos (2010), the recognition that their knowledge and practices are socioecological is a crucial element of their political empowerment and opens new perspectives for justice and socioeconomic development. In many interviews, people specifically

stated that the forest offers opportunities and provide for, but that the help offered by the forest requires working, and working with, ecosystems:

“I will pass all my life burning in the sun. If we will not work one day, we will not eat two days. Who is going to gives us a free cup of water in the cities? No one. In the forest we do not need money to eat.” (#13, male, Pando)

Beyond the rhetoric of development and mainstream poverty alleviation schemes, working the forest and with the forest are the main forms of getting by or escaping more acute conditions of deprivation. It is exactly the socionatural identification of the poor that presents the possibility of political autonomy and the interruption of the long trend of poverty. Instead of the easy, largely urban, discourse of environmentalists about protecting the forest, the alternative ethics of the poor is based on physical effort and appropriate knowledge. This form of grassroots environmental ethics is put in practice through the constant and almost daily reworking of the forest, in a perennial practice that incorporates the condition of poverty into socionatural relations:

“Well, I think that I was already born poor. They have already taken everything they could from me. The society has been built in this way for many years now. (...) I think that the forest is a companion to those who live in it. But that’s not enough, the forest offers an important part of our life and the government offers nothing?” (#47, male, Pará)

Reworking the forest and with the forest – for example, producing subsistence food, artisanal artefacts and other objects that can be sold in local markets – constitute the most concrete alternative to the anti-commons trends of mainstream development. The impasse of development and poverty-making is only overcome with substantive solutions that can be found through a contextual, place-based approach to resources and social relations (Yapa 1996). Through a persistent engagement with people living in and near the forest, this research project highlighted that forest communities in the Amazon cleverly associate the value of the forest with the value of their own labour, in a way that both spheres of value are inextricably linked. Their condition of poverty is the outcome of powerful hegemony being applied simultaneously to both them and the forest (which exist as a unified socionatural category), but it does not diminish the value people attach to their community life. At the same time, it will never be possible to overcome poverty without confronting the hegemonic forces – in alliance with other groups in the region and elsewhere – that persistently undervalue the socionatural whole and accumulates capital from fragmented elements of socionature (e.g. mineral resources, timber, water storage and electricity

generation, plantation farms, etc.). The mere preservation of socionatural relationships will never be enough to escape poverty if the hidden hand of hegemony maintains its control over socionature for the purpose of an exclusionary development. On the contrary, the reduction of poverty in the rich ecosystems of the Amazon is a necessarily a political project across different scales and social movements.

For the forest-dependent poor, their association with the Amazon ecosystems is in itself the main political answer to the perverse poverty-making geography. Significant tracts of the Amazon are now landscapes of impoverishment, large territories where deprived groups formally own or occupy pieces of land in order to practice subsistence or semi-commercial agriculture. In such impoverished areas, it is exactly the close connection with the forest (or what is left of it) that constitute a very important safeguard mechanism against famine and economic uncertainties. After the collapse of the rubber production promoted by Henry Ford in the lower Tapajós river basin (known as the Fordlândia Estate) the poor were able to subsist on due to their connections with the ecosystems as a form of residence to the crisis of capitalist activity in the Amazon after the Second World War (Grandin 2010). The experience of local communities along rivers or roads, around the borders of large estates and in extractive reserves constitutes important, ingenious socionatural activity where viable alternatives to hegemonic and unjust development can emerge. The marginalisation is therefore relative and, for many forest-dependent communities, the best form of hope is to reaffirm their socionatural condition and establish strategic alliances across multiple scales. Their (multiple and legitimate) demands don't start from a state of hopeless destitution, but from a position of strength provided by their interaction with the forest and with other comparable groups in the Amazon region and in other parts of the planet.

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