Chapter 9 Urban Tropical Forest: Where Nature and Human Settlements Are Assets for Overcoming Dependency, but How Can Urbanisation Theories Identify These Potentials?

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Abstract This paper focuses on the extensive urbanisation of the Eastern Amazon, where human settlements date back to an era when total cooperation existed between man and nature, a time when land, water, forest and people were perceived as inseparable parts of the whole. However, this harmonious situation has ceased to exist following several episodes of colonisation and modernisation. During the last initiative to integrate the region with the rest of the country, it was classified under the social divisions of Brazilian labour as agrarian and suitable for the mineral extraction industry. Furthermore, the recent overlap between the interests of privately owned global companies and federal investments in logistics, and of the pattern of Portuguese colonisation, has led to a process of hybrid urbanisation. The historical pattern of population dispersion has also suffered modifications whereby connections have been established that link previously isolated settlements to national centres and global metropolises. Such practices have acted against all current data on climate change and have disrespected nature and the environment to such an extent that selective modernization and its reverse, informal occupation, have increased the spread of deforestation, pollution, the siltation of rivers and the reduction of surface water volumes. This article demonstrates how these transformations have been responsible for the exclusion of those groups forced onto the margins of modernisation: people born in the region who depend on the biophysical

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© Springer International Publishing AG, part of Springer Nature 2018 P. Horn et al. (eds.), *Emerging Urban Spaces*, The Urban Book Series, https://doi.org/10.1007/978-3-319-57816-3_9 base for their livelihood, including indigenous peoples, caboclos (the offspring of indigenous and Portuguese peoples), peasants and traditional communities who live in rural areas or were pushed into urban areas once the countryside had been restructured. The article also seeks to expose local resistance to this process, thereby revealing how extensive urbanisation may evolve from mere economic integration towards comprehensive urbanisation, capable of creating new forms of citizenship and a respect for nature, thereby transforming it into the extensive naturalisation of the urban.

Keywords Brazilian Amazon · Pre-Colombian urbanisation · Extensive urbanisation · Belém · Santarém · Marabá · Altamira · Afuá

9.1 Introduction

The urbanisation of Brazil's Eastern Amazon, together with the region's positioning in the world-system as a peripheral supplier of raw materials, has provided significant empirical evidence on the manifestations of planetary and extensive urbanisation (Monte-Mór 1994). A partial replication of global formulas has occurred in all spatial structures, which have been created to support both productive and financial capital across the region. Moreover, due to the incomplete conversion to a modern industrial rationality (Santos 1986, 1979; Costa 2012a, b), a struggle has occurred between the different rationalities applied to the studied territory. Therefore, the present paper sets out to explore the growing demand for new concepts that better explain this set of circumstances, in alignment with the critiques held on development theory (Furtado 2007; Tavares 2011) and postcolonial approaches developed within similar peripheral contexts of the world-system (Roy 2015; Watson 2014).

In this respect, there is a need for the process addressed in this paper to be situated within a broader discussion on the expansion of capitalism as a global system compounded by the centre–periphery relationship (Prebisch and Cabanas 1949). The centre of the capitalist system is seen as an engine charged with the hegemonic organisation of a financial, commercial strategy to expand the system beyond its original territorial borders, with the aim of reinvesting capital surplus into new consumption markets, new raw material suppliers and new market opportunities in the periphery (Furtado 1983).

Historically, this expansion process has been constructed from the centre of the system towards the periphery, according to a diversity of forms and distinct contextual features. It relies on the transfer of physical, financial or commercial capital, depending on the most suitable alternatives for its valorisation. This movement is sensitive and theoretically justifiable since the capitalist system organises itself in such a way as to preserve the extended reproduction of capital (Marx 1990). While capital searches for circumstances of extended reproduction outside the centre, with the support of governments in periphery countries, it fosters and institutionally

organises a new logic for building commercial, financial and cultural (as well as academic) dependency (Frank 1970; Furtado 1983; Quijano 2000). These components, which are inherent to the global system, provide models so as to regulate capital with rules and parameters for resource distribution, financing structures, exchange rate guarantees and ownership rights¹, and which demand the creation of new perspectives and concepts in order to overcome the historical traps that maintain the periphery in such a manner.

As a result, the present-day Brazilian Eastern Amazon is addressed here as a place where ordinary urban, rural and natural environments coexist. The rural environment is manifested through a number of practices that migrants (either peasants (Costa 2012a, b), indigenous peoples (Hecht and Cockburn 1989; Heckenberger 2005), *Quilombolas* (Almeida 1997) or *Caboclos*² (Parker 1985; Adams et al. 2006) have introduced to the city, while the natural and/or wild environment is displayed through the biophysical support demanded by traditional practices, related to urban production and to sociability—including rivers, wetlands, forests, gardens, beaches and common lands. After decades of shifting urbanisation patterns—the creation and expansion of cities, changes in rural land uses and a denial of nature—the region offers inspiration on how it would be possible for cities to function as a suitable basis for promoting socio-biodiversity (Monte-Mór 2004).

The predominant understanding of development within the region associates exogenous inputs with progress, despite the outstanding capacity observed during stagnant periods to innovate and essentially provide affordable solutions for local problems and overcome historical dependency, in terms of offering a repertoire of technical and social solutions for specific regional and local issues (Jacobs 1984; Furtado 1983; Silva 2017). These endogenous solutions are benefited by traditional local knowledge, which modern segments of society wish to negate. New transport and communication technologies have increasingly transformed scattered settlements into distant peripheries of global cities, in that they provide access for all types of goods. Small cities have therefore become strategic places inserted into global production networks through logistics, as suggested, for example, by the approach of planetary urbanisation. However, from a quotidian perspective, the

¹This explanation helps to better situate the role of peripheral countries in the international division of labour established between the nineteenth and twentieth centuries. These countries were required to provide raw materials and primary goods, while the centre of the system could concentrate spatial structures so as to produce, distribute and commercialise industrial goods. Such thinking has supported theoretical approaches influenced by CEPAL (Economic Commission for Latin America—one of the five United Nations regional commissions), which were very influential among Latin American scholars during the 1950s and 1960s. Since that time, they have been reframed and broadened, to allow new interpretations on the integration of Latin American countries to the global capitalist system (Prebisch and Cabanas 1949; Toye and Toye 2003; Baer 1962; Love 1980).

²These groups originally inhabited rural areas, peasants are rural family-based producers, Quilombolas are descendants of African slaves who escaped from their owners to live in isolated, secret free communities, and Caboclos are a typical social group in the Amazon created from the miscegenation between the indigenous peoples and the Portuguese.

control of private land and homogenising actions by the real estate sector have established a manner with which to transform these cities into places that produce surplus and exclusion, where spatial patterns indicate how both people and nature have generated levels of resistance. The following sections seek to develop and provide evidence to support this argument, departing from the fact that urbanisation has reached a planetary scale, with alienated consumption as its main device. The overarching aim of this chapter, therefore, is to highlight the need to foster extensive naturalisation as an emancipatory strategy that both acts against the accelerating rates of urban poverty and respects diversity and the universalisation of citizenship, as proposed by Monte-Mór (2014, 2015).

The core ideas presented in this paper were developed within a research project entitled *UrbisAmazônia*, with the aim of understanding contemporary urban Amazon. It was conducted over a 4-year period by an interdisciplinary team within a multiscale perspective involving seven research institutions. The project has created an environment for collective discussion in seminars and enabled a number of composite analyses (economic, demographic, spatial and institutional) and several fieldwork missions (one collective, and at least one in each cited city, outside Belém). The theoretical approach and empirical analysis presented herein were first outlined in 2012, during fieldwork in the south-eastern region of the state of Pará, and reviews the results of individual researchers (Ph.D. thesis, Master Dissertations and Undergraduate Monographies cited in the text), matured after several rounds of discussions and seminar presentations.

9.2 The Virtuous Cycle Between People, Nature and Knowledge

A number of recent articles, based on archaeological discoveries and field studies, have provided evidence that Amazonian indigenous societies produced their spaces with clear intentions and consistency, and go on to illustrate the extent and complexity of their work. Studies have further revealed the manner in which their work is interwoven with the natural environment. In reference to the upper Xingu region, Heckenberger et al. (2008), for example, argue that the upper Xingu region of the southern Amazon (Mato Grosso, Brazil) is one critical example of complex settlement and land-use patterns. Recent findings on settlement planning and supralocal integration, which document a highly self-organised anthropogenic landscape of late prehistoric towns, villages, and hamlets, with well-planned road networks across the region. These patterns, although differing substantially from other world areas, share characteristics common of small, urban policies elsewhere.

According to these authors, Pre-Columbian Amazonian communities were scattered throughout several settlements across the major river basins of the region. They produced what are considered to be unique forms of urbanity, due to their diversity and originality, and were also able to deal with both the surrounding wealth of available resources and the challenges they posed to the human presence. Structures for managing the wetlands, artificial lakes and dams, canals, causeways and plantations on floodplains demonstrate how their constructions were built to integrate with the dynamics, temporality, complexity and relative permanence of the region's natural cycles. These indigenous civilisations proved able to appropriate nature as a productive force: in gardens and orchards interspersed with the settlement areas, in cultivated islands of selected forest species, in the agricultural production of fertile lands—the Amazonian *terra preta*, in the daily management of biomass and in the controlled use of fire. One further outstanding feature is the scale and complexity of the abstract knowledge they required, which included elements of geometry and calculation, large-scale measurement and drawing, trails and roads, regional integration and the hierarchisation of places and structures (Heckenberger et al. 2008).

Hence, these practices provide a clear illustration of how these societies created intentional interventions in space and nature, which led to the establishment of extensive, complex settlements, and to the production of space in which to live, to meet and interact, to produce and exchange, to celebrate and to engage in politics. These were unique forms of urban inventions, in which articulated elements brought meaning to forms of expressions that may only be fully appreciated from the perspective of urban life—including Amazonian ceramics, *terra preta*, megaliths and geoglyphs, multilingual societies, and a holistic vision of the world (Neves 2003; Schaan 2008; Franchetto 2011; de Castro 2002). These are marks of a standard of civilisation and of original development in the tropics, based on the millennial process of creating social meanings for the natural world.

9.3 Urbanisation Produced by Colonisation and Modernization

During early colonial times, there were five nations competing for the Amazon. The region was a mundi frontier, with an abundance of land to support agricultural production (still an important sector for the economy of the time and the main reason why different nations extended their reach into more periphery colonies). The Amazon was able to provide gold to the Spanish and exotic spices to the Dutch. It offered control of South America's coastline to the French and the British, and land to the Portuguese colonisers, who finally achieved ultimate hegemony in the region known today as Brazil.

Although the main aim of the Portuguese authorities was to introduce the cultivation of sugar cane into the Amazon, it was in fact an oppressive extractive system that effectively consolidated their presence as colonisers, by conforming to the European demands for exotic spices. During colonial times, the Portuguese presence in the Amazon was guided by a utilitarian view of nature, since specific operations and the viability of colonial business took advantage of all the benefits offered by nature, especially biodiversity, accessibility to rivers and the sophisticated knowledge that native people had cultivated over millennia in their remarkable indigenous settlements (Becker 2013).

In the seventeenth century, urban plans and regional planning based on Western science and rational authority were introduced to the Amazon by Sebastião de Carvalho e Mello, Marquis of Pombal. In 1757, this influential Portuguese Prime Minister brought into effect, by decree, the *Diretório dos Índios*—the Directory of Indians, which led to the creation of villages that spatially, symbolically and institutionally overlapped the settlements created by Jesuit missionaries. One century before, these settlements had incorporated the living spaces of the indigenous people, who had inhabited these places for centuries (Almeida 1997; Risério 2012).

Besides this 'urban colonising strategy', it was commonplace for the Portuguese government to encourage miscegenation between the indigenous population and Portuguese citizens. The mestizo families (half indigenous, half Portuguese, also known as *cabloclos*), who established themselves within this proto-urban network of settlements, were the key labour factor in the production of spices exported through Belém, the main regional city and port of the Amazon. The multiple ability of the mestizo population to identify, manage and market the singular resources of the tropical forest was a special asset that effectively enabled the Portuguese authorities to include the Amazon region in the Luso-colonial empire (Costa 2012a, b).

After independence in 1822, the Brazilian elites maintained the strategies of exporting natural resources, and also acquired European hegemonic values, devoting their efforts to spreading urban-industrial rationality across the Amazon (Monte-Mór 2004; Weinstein 1983, 2002). This fact deepened spatial, social and environmental inequalities and, to an extent, helped to establish that cities and human settlements were in opposition to nature, which was viewed as pristine and untouched. The overlap between the Western mindset and the mestizo manner of addressing and building relations between the environment and the quotidian, little by little erased the wisdom involved in cooperating with nature and understanding its limits of resilience, which could still be identified in the indigenous and mestizo urban experiences throughout colonial times.

Two historical moments were crucial in consolidating these trends during the nineteenth century: the Cabanagem Revolt and the rubber boom (Parker 1985). The Cabanagem Revolt was a complex political moment in Amazonian History. The position and power of the local political elites were unsettled by Brazilian political independence, and their ability to maintain control over the poor population as a labour force, especially the caboclos, was profoundly damaged. Over a period of 18 months, severe violence broke out across the region, and the caboclo population adopted drastic measures in order to fight against a state marked by profound social degradation and exclusion. This period was one of the 'most violent and chaotic in the history of the Amazon' (Anderson 1985: 65). More than 30.000 people died in the fights and epidemics, out of a total population of 130.000. 'The elites learned their lessons well from violence, and would continue their hold on the politics and economic development of the Basin, using subtler economic ties such as the *aviamento* system, and scrupulously avoiding any movement toward allowing any

non-European *caboclo* or the new European immigrants any avenue of political activity' (Anderson 1985: 80).

The rubber boom introduced big cities such as Belém and Manaus to the rapid, elitist dream of European modernisation (Weinstein 1983). This process attracted urban commercial elites to a worldview entirely biased towards Western urban-industrial rationality. Simultaneously, it also compelled the local subaltern groups and migrants from the Brazilian Northeast to work as rubber tappers under conditions of semi-slavery, thereby devaluing caboclo social practices, wisdom and history. The leading contradiction of the time was that the high consumption of industrial goods by urban elites was possible thanks to the massive exploitation of forest products and degradation of the labour force. All these cultural and economic aspects have remained entrenched in the social context of Amazonian society.

During the 1960s, the military government set out to establish the modernisation (and industrialisation) of Brazil, through which the Amazon was integrated into the nation's social division of labour as agrarian and appropriate for the extractive industries. A rupture appeared in the previous relationship with nature and the accessibility strategy shifted away from rivers to roads. The paradigm changed from the previous rationality, which used nature as a supplier, to a more modern, industrial perspective, in which nature itself was the raw material, through which the forest would nourish the sawmills so as to give place to agricultural settlements and cattle-raising farms. The region would then provide the means to boost the country's trade balance through exports, indicating a double subordination to national and international interests, while shifting decision-making out of the region.

Criticism of this industrial, modernist approach adopted the view that nature was pristine, thus demonstrating an internal imbrication with the paradigm of industrial society. Any human presence was considered a disturbing factor to the balance of nature, including the indigenous and caboclo communities, who were also considered unwelcome (Balée and Erickson 2006). There was an assumption that each of these groups was a 'guest' or a beneficiary of the forest and of the natural resources available in the Amazon. The circumstances of native groups on later contacts (in the early twentieth century) constituted the empirical evidence adopted by researchers to assume that these groups had always been few in number, and were sociologically and technologically backward or simple (Leonardi 1996). The acknowledged virtue was that of the noble savage: living 'in harmony with nature', which signified living without changing the natural conditions, whether for the impoverishment, or the unlikely expansion of natural diversity, density and so on (Redford 1991; Balée and Erikson 2006).

Perceived in this manner, the indigenous populations would never have created cities and civilisations. At the time, it was believed that they were socially and culturally inferior, thereby contributing to consolidate the consensus on an inherent opposition between urbanisation and nature. For too long, fields of knowledge dedicated to environmental approaches have considered urban topics as belonging to the reign of artificial things, in which there was no place for nature. However, it is clearer today that this is a position of non-social perspectives, and that a socio-environmental approach would be more suitable, since in peripheral areas many productive processes overlap and coexist in one same territory, and people have different levels of access to modern industrial systems (Monte-Mór, published in the present volume). This becomes more evident when the vision goes beyond a classical rural–urban dichotomy and takes land use and private property into account in order to understand the flux that comes about from replacing one poorer social group with other groups that are better off.

During the twentieth century, the industrial paradigm prevailed and it was thought that indigenous societies made no valuable contribution to any dimension of development, and that they lacked any relevant material resources including cultural, artistic and social knowledge. In postmodern society, the indigenous and caboclo ability to interact intelligently with symbols and information, and to belong to social groups and places based on affection, would be considered an important asset in places under creative material production (Hardt and Negri 2000). Indeed, the endogenous resistances, possibly due to the incomplete conversion of the territory and society into modern industrial rationality, should inspire the present generation to review the ubiquitous capitalist need for homogeneity, integration and hegemony (Brandão 2007), and move forward, from a paradigm that searches for equality towards one that seeks to respect diversity (Monte-Mór, published in the present volume).

As the indigenous capacity to respect, produce and engage with nature becomes more evident, so the ecological complexity of both the tropical forest (soil, rivers, climate and biodiversity) and its social landscape (indigenous and mestizo societies, neo-peasants, urban, etc.) begin to be acknowledged. Although these societies no longer exist under the same circumstances as those described in archaeological research, their descendants still maintain their culture but are currently among the very poorest people living in urban Amazonian Brazil (Pereira 2012; 2016).

Acknowledging the different social groups within present societies as well as the need to provide the means for those who are different (those who do not produce or live according to the rules of a capitalist system that is hegemonic and totally selective and exclusionary) could be a first step towards devising a more acceptable, alternative approach to urbanisation in the Amazon. This could also provide a pilot experience so as to pursue a further stage of urbanisation, one that is capable of disseminating nature as an ally for social justice across an urbanised world.

9.4 Alternative Urbanisation Strategies for the Brazilian Amazon in the Twenty-First Century

After centuries of impacts and the devaluation of traditional knowledge, Brazilian federal policies have been responsible for generating invisibility towards people and ways of life, and have legitimated a mismatch between biophysical support (soil, water and vegetation) and living beings. These blind spots proved very useful for

the marketing strategies launched from the 1950s to attract millions of migrants searching for cheap, plentiful land, with the possibility of making quick fortunes by exploiting natural resources, under the slogan 'Land without men for men without land' (Brasil 1970). Thus, the second half of the twentieth century witnessed the re-establishment of the sixteenth-century Eldorado, together with the belief that natural resources were infinite and could be exploited with the consent and financial support of the federal government for agribusiness and mining activities.

This path created the previously cited overlaps between the different ways of life and productive systems that generated the contemporary process of urbanisation, which is derived, selective, discontinuous and open (Santos 1986), permeated by signs of resistance to all exogenous practices, diffused over the last decades through federal policies (environmental, industrial, agrarian, urban, etc.) and private investment. The region has become a space of multiple determinations, with a greater dependency on public sector guidelines than observed in other regions of Brazil, and often allied to demands from the private sector. There is also a shortage of investments, which are instrumental to the everyday lives of the increasing population groups of urban poor, whose subsistence depends on a certain degree of access to land or nature, and are identified only as resistance strategies (Monte-Mór 2015).

Cities within the global periphery are accumulation centres that function as nodes where surplus labour is generated, and where the capital surplus is mobilised and directed towards global centres of the world economy. These cities also offer demonstration models, absorbing exogenous inputs and values (generated in modern centres—homogenising global city formulas) to open up a new market for their products, and to spread urban-industrial habits and values (Browder and Godfrey 1997).

The modernization policies promoted by national governments are of fundamental importance to frontier expansion. They promote the dissolution of peasant and indigenous communities in favour of large capital and its speculative strategies, in order to mobilise and apprehend their main means of production-the land. Rural populations (peasants, settlers, indigenous and traditional extractive communities) are forced to leave their territories and move to cities where they often become the urban poor. The process begins when families first send their children to a peripheral area of the city to attend school, while the head and other adults of the family remain in the rural areas producing goods to trade in the urban markets. Once the entire family has moved to the city, they become very vulnerable and move towards temporary employment and unskilled activities. This process has already taken place in different countries at different times. However, the current speed and intensity with which it has manifested in the Brazilian Amazon has further deepened the previously attested capacity of the financial age of capitalism to cause inequality and exclusion (Sassen 1991; Hardt and Negri 2000). The timing of investments is overly accelerated and tends to change institutional frameworks, circumstances of tenure, technological paradigms and the profile of the labour force. Local people are unable to follow these changes; their livelihoods are disrupted and they are finally forced out to the city peripheries. Most of the local population have been unconcerned about tenure regularisation, since occupation was generally considered sufficient to keep control of the land. The arrival of new investments, however, brings with it a formal system, which is not understood by the locals, and is completely dominated by and biased towards the newcomers.

The action of capitalism on the frontier is selective and unequal, since several frontier areas are integrated to centres of the system in different manners, times and circumstances, according to the history of their social formation (Furtado 1983). Nowadays, capitalist penetration is not a direct result of a gradual transition from peasantry to proletarian relations. The process of capitalist integration on the frontier demonstrates several gradients that have resulted in urban intensities across the territory, not only manifested through human settlements and agglomerations but also by units of human occupation related to capitalist production (such as farms, ports, storage systems, power units, etc.) (D'Alasta 2016; Ramos 2014).

The approach that best suits the insertion of Amazonian space into a broader network of global production and urbanisation is 'extensive urbanisation' (Monte-Mór 1994), understood as a process that penetrates regional spaces and virtually manipulates them into continuous networks spread worldwide. It recognises the urbanisation process as being globally led, despite its extraordinarily diverse expressions, which confirm the unequal development of capitalist practices. In this sense, as mentioned above, the Amazon has been placed within this broader network as a periphery for the exploitation of natural resources.

The concept of extensive urbanisation was developed by Monte-Mór (1994) inspired by the Lefebvrian concept of the 'urban zone', the stage of contemporary socio-spatial formation, which leads to the disruption of the city, generating a dichotomic movement of implosion (concentration, and agglomeration of urban practices) and explosion (extension of the urban fabric and intensification of spatial connections). Along the same lines, Brenner (2014) later introduced the concept of 'planetary urbanisation', described as a process that produces a diversity of new capitalist geographies, which express unequal spatial development, and may not be explained through classical rural–urban dichotomies.

This situation may be illustrated by the proliferation of new (global) urban forms (shopping malls, gated communities, housing schemes and large retail centres) and by the large investments in logistics (roads, railways and hydropower units) that have appeared far from the metropolitan regions, increasingly more inserted into peri-urban and rural areas, which have now become amalgamated into distant peripheries (Fix 2011; Melazzo 2013). Postmodern capitalism has created these new geographies, on account of the new routines and spatial possibilities facilitated by new telematics and communication solutions. The transition from classical industrial production to control and financial services has allowed production to be transferred to the peripheral areas of the capitalist system, while at the same time maintaining control of the system in global cities.

A new kind of industry and agriculture has been created, strongly dependent on services devised in these global cities, and although they are able to generate economic growth, they are far from able to promote development. The reliance of postmodern capitalism on knowledge, culture, rooted values and symbols indicates that the ongoing homogenising process in the Amazon is a massive loss of assets. This loss also strikes against current debate on adapting to climate change, which further acknowledges that the very poorest are among those most deeply affected by recent extreme events, such as drought and floods (Ojima and Marandola 2013).

While homogenisation is not complete, there still remains a possibility of transforming something, which was previously considered a disadvantage (such as dependency on low technology or a narrow division of labour), into an emancipatory opportunity. However, this would demand an ontological shift in the peripheral regions, a search for innovative solutions within its own experience, and the creation of new concepts and viewpoints. The first step for making the socio-biodiversity of the Brazilian Amazon more visible would be to reformulate the right to the city so as to incorporate the right to nature for all those who are excluded from, or simply outside, the hegemonic formal economy.

The following section explores empirical data from recently undertaken research with the aim to better illustrate the current transition, and the rhythm with which the above-mentioned losses are taking place in the Amazon.

9.5 New Emergent Urban Spaces

Consolidation of the empirical data and tracing the current processes indicate that there are three basic trends involved in urbanisation and development strategies, which are prone to generating socio-environmental conflicts. These are as follows: (i) those that emerge from the accelerated, contradictory interaction between intense urbanisation and stagnation; (ii) those related to urban and regional reconfiguration and differentiation; and (iii) the appropriation of production in the existing cities by fractions of capital, thanks to pro-privatisation and neoliberal policies, which aim to foster the arrival of international investments.

9.5.1 The First Trend

The first trend is structural and occurs in areas effected by successive cycles of growth and restructuring. It encompasses all the expansion cycles that occurred in Amazonian cities under the influence of economic dynamics oriented by exogenous demands (exports) in the sixteenth century (the spice cycle), the nineteenth century (the rubber cycle) and then in the twentieth century when the Amazon was economically and physically integrated with the rest of the country. Hence, the main characteristic of this trend would be the intense economic, social and spatial changes that occurred within a very short period.

One of the most representative ongoing examples of this process in the region is Altamira—a traditional city, which provided key support for land reform colonisation projects, implemented alongside the Trans-Amazonian Highway in the 1970s, and that experienced a fresh boom between 2011 and 2015. Negrão (2016) presents the outcomes of the city's most recent boom caused by the construction of the Belo Monte hydroelectric power plant, located 52 km from Altamira. During this period, the city received 25 thousand workers, boosting modernisation and bursts of urbanisation. The actions of these new forces repeated and renewed the dynamic process of urban transformation, perceived by Lefebvre (2000 [1970]) as the implosion/explosion of the city. The expanding urban tissue and the dispersion of the city's functions and structures reinforce the drive towards commodification and consumption, and fierce social conflicts among the different users: social groups of an especially 'modern kind' and traditional inhabitants.

In the case of Belo Monte, in order to receive the operational license, it was stipulated that Norte Energia, the consortium responsible for the construction works, would provide the city of Altamira and its surrounding areas with building works to the value of five billion Reals (USD 1.5 billion). As part of this socio-environmental compensation owed to the city, the company has consequently conducted a massive eviction programme and relocated poor communities and indigenous peoples out of the city to less desirable areas. The agenda for using this money was defined by the elites, who were anxiously seeking modernisation, instead of which, great disruption was caused to the everyday lives of the local inhabitants, especially those of indigenous origin, who suffered evictions and displacement.

Before the construction works began, there were 16 thousand indigenous people living in the city. Originally, these groups had settled on the margins of Altamira Creek, amid other poor social groups, from where they could easily reach the forest by boat, work in extractive activities or as tourist guides on the several islands and beaches that have now been submerged. Relocation took them to areas where land was cheap, but from where they now needed to pay the equivalent of five US dollars in order to reach the river. Their social network has been completely dismantled, and after a long absence, they have lost their position in the forest communities and are literally starving on small plots of land (designed for regular social urban housing) where they are unable to grow their traditional crops (manioc and other vegetables).

The modern urban mindset produced 4100 standard specification homes on distant housing estates, and then the real estate sector stepped in, providing new urban development schemes according to global formulas: gated communities and shopping malls. However, consumers were unable to afford these newly designed homes, and therefore built vernacular typologies on plots of land located on designed developments, thereby going against the expected housing standards. Public and private interventions reinforced the consensus of the elites regarding the need to clean up the area called Baixão do Tufi, on the margins of Altamira Creek (Fig. 9.1), removing its poorer inhabitants, in order to transform it into a recreational facility for the middle and upper classes. Thus, this process of extensive urbanisation updated consumption values and disrupted the ancient forms of cooperation between people and nature, which had long been incorporated into the routine practices of everyday life. Once the process was established in this newly



The satellite image of Baixão do Tufi before and after urban intervention respectively

Images of the area called Baixão do Tufi before and after the urban intervention, respectively



Fig. 9.1 Urban transformations in the floodplain area of Baixão do Tufi, in Altamira, Pará. *Sources* Google Earth Pro 2017 (top); the Authors (bottom)

incorporated urban area, the local elites were anxious to consolidate the new landscapes, with the desire for global companies to begin operating in the area (such as the mining company Belo Sun, which over the last year has fenced off former rural and wild areas). This has reinforced the invisibility of the poorest population and the environmental degradation, and pushed the region towards a speedier conversion to hegemonic economic practices.

9.5.2 The Second Trend

The second trend is related to the urban and regional reconfiguration and differentiation, and the emergence of polycentric, polymorphic, multi-scalar spatial arrangements, as never previously experienced in Amazonian capitalist urbanisation cycles. The overlap of several different processes is creating new socio-economic circumstances, social transformations and new institutionalisations. One example is the creation and proposal of extending metropolitan regions to non-capital cities, which have historically been affected by the boom and bust cycles. These proposals connect cities more than 50 km apart, with roadways that function as expansion routes from the cities and form a new kind of urban fabric connecting several municipalities. In spite of the precarious living conditions that persist in the human settlements, there has been a densification of infrastructure networks, mostly dedicated to transportation logistics and aimed at the efficient export of goods (roads, railways and airports). The diffusion of these general circumstances of 'industrial' production has quickly restructured the traditional countryside, thereby redesignating villages and peri-urban areas to receive new functions related to production and the trade of commodities (mining industry, agribusiness and hydropower production) and to become adapted to global formulas (Cardoso et al 2017).

The most important regional centres outside Belém, the state capital of Pará, are Santarém and Marabá, which were previously traditional Amazonian riverside cities. Both cities have experienced several export cycles and were selected by the real estate 'industry' to receive new expansion areas. Marabá has several nuclei on a site crossed by two large rivers and, on account of its strategic location, has also received a regional airport, has become integrated with two federal highway networks, and has received a railway connection. In the near future, Marabá will also receive a port to support agribusiness, as well as another hydropower plant. The oldest nucleus of Marabá, which used to be the traditional city, has been adapted to provide a waterfront for the city. This spatial change has drastically reduced the possibilities of many inhabitants to access the riverbanks where they have practiced traditional forms of subsistence for generations, such as fishing, laundry services and boat maintenance (Cardoso 2010). Many floodplains historically prized as green spaces are now viewed as developable land. These areas are equally important for both popular subsistence activities and leisure, as in the case of the beach located on an island facing the city. The expectations of the real estate sector are that the new dam will enable the Itacaiúnas River to be diverted, thereby incorporating a huge amount of floodplain areas into the real estate market. This new configuration will also submerge beaches and therefore further erase natureand all the associated quotidian nature-driven practices (herb and food cultivation, fruit gathering, fishing and swimming)-from the city space. The unavailability of free leisure and its replacement by paid services (as with shopping malls) deepens poverty even further among those social groups whose living spaces have been destroyed (Pontes 2015). The possibility of creating a system of green areas and public spaces is invisible to local authorities, who consider industrial urban strategies far preferable to the genuine innovation that could come about through an aggregate of new knowledge and technologies and successful old spatial solutions (Pontes and Cardoso 2016). In these areas, local authorities have failed to recognise Agenda 2030 and other international agreements that promote sustainable development (United Nations 2015).

Over recent decades, Santarém has become a port of export for soybeans, due to its link with Brazil's central regions with the opening of a new federal highway (BR 163). It is surrounded by protected areas (a national forest, an extractive reserve and settlement projects for agriculture and extractive activities) that support native producers, and also by a myriad of small century-old villages, scattered along the margins of the river and in land, ever since the time of the rubber boom. Migrants flocked to these small communities during the rubber boom and adopted livelihoods linked to the forest, river and small crops. Roads and agribusinesses have progressively changed the patterns of land use and land prices, and a polycentric metropolitan region was created with an average distance between the cities of around 35 km. The ongoing conflict between network logistics to support agribusiness and the production and reproduction of inhabitants has been a direct result of connecting this region to the global market. This rupture is increasing and is supported by the urban elites, despite strong resistance from indigenous inhabitants whose livelihoods depend on the forest, rivers and rural settlements.

The area has gradually been adapted for the production and export of soybean. The traditional settlements and community networks have been replaced by the soybean monoculture, since the global corporation Cargill began to operate in the region, added to which there is now pressure from new real estate developments to pursue the lands now occupied by small communities located close to the city. New ports are currently in the approval phases and will demand the eviction of ten *quilombola* communities and three urban communities of indigenous descendants. Within the city of Santarém, all the traditional communities are located near rivers and streams, in areas that are valuable because they could easily receive infrastructure extension. Through the diffusion of an idea for a waterfront recreational facility, the margins of all the rivers and creeks are under dispute, and tend towards privatisation in order to construct weekend residences (Cardoso et al. 2016a, b, c).

The mosaic of land occupations that surround Santarém has caused deep social and environmental transformations, which have blended new configurations of contemporary capitalism into old communities. From the city of Belterra through to an upper-class housing development called Planalto, built for migrants from the south of Brazil, all settlements stand a high risk of pesticide contamination, as a result of their proximity to the soybean crops. Initially, the residents of Planalto settled in the middle of soybean fields in order to avoid any cultural or physical interaction with the local people. The property prices in these settlements are the same as those located in the very upper-class district of Boa Viagem in the north-eastern coastal city of Recife (fieldwork 2014, 2016) where the real estate sector has promoted the construction of high-rise buildings, such as those which are now causing the implosion of Santarém's most consolidated area (fieldwork 2017).

Despite these adverse conditions, some traditional extractive communities have been very successful in cooperating with nature (through the wise management of natural resources) and using its assets to promote collective wealth. For example, in the community of São Brás, which is located in an institutionalised agrarian-extractive settlement where the land is treated as common, there is a significant drive towards tourism. During the seasonal festivals in Sao Brás, the locals present their gastronomy, music and dance, set out in a multipurpose communitarian open field, that attract people from the city and other communities (TV Tapajós, 1 July 2016). Several communities based in protected areas have built their livelihoods from the river, forest and land, helped by a network of public institutions and NGOs. They sell their products as ingredients for the local gastronomy, produce handicrafts using vegetable fibres and supply the city's street markets with their products. Consequently, they have been able to improve their incomes more than those who live in the city by linking traditional knowledge to modern urban knowledge, as endorsed by Santos (1979); work that addresses how two independent circuits may operate in the urban economy of periphery countries. The institutionalisation of these communities has protected them for decades, but since they pay less taxes to the local public authorities than those engaged in modern activities, they have become devalued and stigmatised (fieldwork 2014, 2016).

9.5.3 The Third Trend

The third trend comes about through the appropriation of the production of the existing cities by fractions of capital, due to pro-privatisation and neoliberal policies that aim to encourage international investments. This was induced by mega-events held in several of the country's metropolises (World Cup and Olympic Games), which became the justification for large urban interventions. However, this has also occurred in consolidated areas of state capitals and other smaller cities through interventions that express new symbols, compatible with global cities, and that make cities more attractive to the tourism industry (waterfronts, shopping malls and cultural centres). One other manifestation of this is urban sprawl, brought about by urban developments that are supposedly in line with international standards (access to green areas, provision of good infrastructure, decent housing standards, security and social homogeneity) (Muxí 2004).

The city of Belém, the 400-year-old capital of the state of Pará, is the best illustration of such processes. Here, official systemic interventions were undertaken in the historical area of the city in order to attract international tourism, through gastronomy. However, the focus on building works disguised the dismantling of a social network of biodiversity constructed over centuries and supported by links from extractive production and informal trade, mainly at the Ver-o-Peso market complex, and other ports scattered along the margins of the river (Cardoso et al. 2016a, b, c). Several overhauls and changes in the operational regulations of markets are causing gentrification among the vendors and around the vicinity of the Ver-o-Peso market. The capitalist appropriation of the city's river margins, aimed at associating historical buildings with the creation of a waterfront with consumer services and activities, has followed the experiences of strategic planning in the global north. It also denies the importance that natural resources such as fishing and the gathering of fruit and herbs provide to the success of local gastronomy.

This systemic action has also reached the Island of Combú, 1.5 km across the Guamá River, and equally exemplifies the coexistence of urban and natural ways of living. The Island of Combú is one of the 40 islands under the jurisdiction of Belém, with a natural site formed mostly of floodplains, and maintained as an environmental protection area. The inhabitants have formed an organised community that produces acai berries, cocoa and chocolate for the finest local restaurants. They also run their own home-based restaurants on demand and offer boat rides to visitors, in a small-scale touristic activity, which allows them to diversify

their income. The island has become a local haven for visitors, who would like to be in closer contact with the river, spending time in a place where the local inhabitants may benefit from maintaining their original way of life while enjoying the urban facilities located right by the edge of the river (Bibas and Cardoso 2016).

However, the real estate sector also views this island as the next frontier for urban developments, following previous experience on other islands already connected to the mainland by bridges, and the historic invisibility of local inhabitants. These days, the islands have become strategic, since natural areas are disappearing in the mainland city due to the inappropriate urban sprawl. Although the urban tissue of Belém's city centre, from the time of the rubber boom, was inspired by European cities (Duarte 1997), with well-defined squares and public spaces, until the 1970s, the main use of land within its expansion area was connected to smallholdings and farms, which respected the natural spaces (inner river flood-plains) and were used for leisure, sociability and production. Throughout recent decades, several economic processes have amalgamated different typologies of urban developments in this expansion area (housing schemes, irregular land divisions, occupation and gated communities).

These settlements were oriented on an individual basis, with no global plan for the city. As a result, most of the available natural areas have been urbanised, rivers and streams polluted, no provision of public spaces, and apart from the squares for the hitherto uncompleted housing schemes, any available space has been targeted towards upper-class consumers, thereby determining that access depends on income (Miranda and Cardoso 2016). The competition for land has affected access to freshwater and to nature, insofar as it has expelled those not part of the formal urban economy (e.g. fishermen and small farmers) or replaced them by dispossessed urban poor in informal occupations similar to squatter settlements. This is the inspiration for the Island of Combú.

The contradictory appropriation of the landscape by capitalist interests is benefited by the 'brands' and identities built over centuries by the local population, while they are simultaneously expelled by the Disneyfication of the city, which masks the significant social and environmental conflicts. The resulting surplus of this change is concentrated into the hands of the few and has produced urban poverty and environmental impacts, observed through the growth of social inequality sweeping the landscape, with watercourses being landfilled, and vegetation removed for city expansion, etc. Such shifts have also pushed the city towards increasing dependency on cars, and industrial consumption, as well as the death of public spaces and an increase in violence. The same elites that operate this process in the capital offer this approach to smaller cities, as previously described to Santarém, Marabá and Altamira.

Cities and settlements located in the Marajó archipelago, nowadays considered stagnant and well out of the reach from the powerful dynamics of capitalism, provide examples of how multiple determinants interact in the resistance of traditional rationality. This is the case of Afuá, a city built on stilts in a location hit by two 3-hour periods of daily flooding. Timber exploitation and palm oil production are the main industrial activities of the area, but are currently in decline, due to

continuous deforestation. Inhabitants react to water with happiness and gratitude. They occupy public spaces in order to play with water during the highest tides of the month (full moon), but at the same time dump sewage directly into the water, to be carried away by the daily tides. While water supply, sewage and rubbish disposal are technological challenges, public spaces are very much alive, and those who live in this area, completely built on stilts and of wood, are extremely happy with the environmental performance of their homes (Mesquita 2017; Fig. 9.2).

Land is publicly controlled in Afuá, because the city is situated below the average tide levels (known as Marine Areas), and the houses are adapted for flooding. However, both the shortage of timber and the rising timber prices are gradually persuading new generations to decide on masonry to build their homes, and other buildings, which often suffer from foundation problems. There is a crossroads ahead: either empower inhabitants with physical and social technologies to be able to maintain their way of life, or allow them and their ancient knowledge to disappear.

The Island of Cinzas, an isolated locality on the Marajó archipelago, where commercial overfishing was occurring and the stock of natural resources decreasing, proved that the first option is possible. Inhabitants requested support from the Forest Unit of Embrapa (the Brazilian Enterprise for Agribusiness Research) in order to receive access to sanitation technologies and better management of natural resources. The initiative received the FINEP Award for Social Innovation and provided sustainable procedures for extractive practices. Cooperation with biodiversity and institutions has been decisive in allowing the inhabitants of this isolated community to live as they would like. They have consequently adjusted the size of their shrimp nets to prevent the extinction of stock, provided places for beehives to increase pollination of the acai berry palm trees and installed adequate sewage technology that provides fertiliser for the fruit trees (FINEP 2013). Figure 9.3 provides illustrations of the manner in which cities express traditional occupation patterns and ways of life, and of the homogenisation due to the advance of extensive urbanisation. These cases provide evidence that the current debate on extensive urbanisation is biased towards industrial hegemony, while ignoring the



Fig. 9.2 Scenes in Afuá: local inhabitants enjoying the water during the highest tide of the month (left), housing typology on the riverfront (right). This is not a tourist spot, and the shortage of wood is an excuse for replacing wooden structures with more modern technologies. *Sources* The authors

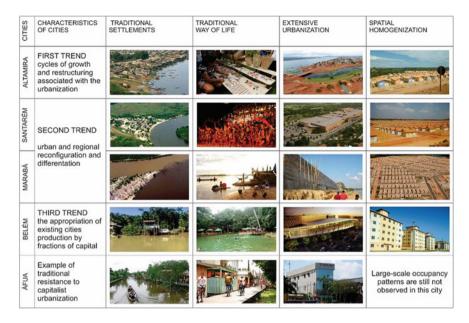


Fig. 9.3 Illustration of the three trends highlighted in the text. Photographs of Altamira from left to right: traditional urban occupation, handicrafts and the results of eviction and housing schemes in the My House My Life Program. Photographs of Santarém from left to right: indigenous occupation, Sairé Festival, shopping mall and housing schemes in the My House My Life Program. Photos of Marabá from left to right: oldest city quarter, traditional uses on the margins of the river, the wall built since 2007 and housing schemes in the My House My Life Program. Photos of Belém from left to right: housing typology on the Island of Afuá, bathing in a popular resort, shopping mall and housing schemes in the My House My Life Program. Photos of Afuá from left to right: river accessibility, typical street on stilts, new hotel built of masonry and concrete. *Sources* Pereira, Negrao, Silva, Gomes and Thomazelli (authorisation for publication of photos received)

fact that in many places of the world, especially in southern periphery areas, other patterns of human settlements have overlapped with those generated by economic globalisation.

9.6 Conclusions

The ubiquitous presence of capitalism produces homogenisation and provides the minimum levels of integration with which to operate, but the effect it has on places comes with different rhythms and intensities, and is blind to the subsequent social and environmental conflicts.

Understanding such diversity depends on an ontological shift in order to approach the facts. The current phase of capitalism presents a completely different approach towards the periphery and the central areas. Cases herein presented have provided evidence that modernisation strategies rely on material and social, cultural and environmental homogenisation, and are very selective and unable to provide formal job centres in the same proportions with which they promote migration and urbanisation. Too often, there is a mismatch between the availability of natural resources and the understanding that they result from multifunctional, multiagent appropriation, in that the habitat integrates nature as a support for subsistence, culture and social behaviour. In these cases, the coexistence of natural (never understood as pristine, but rather socially produced spaces) and urbanised sites must be guaranteed, at least to compensate for the strong ongoing restructuring of rural areas. Rapid changes and preconceptions regarding the way that urban areas should be have favoured the reification of nature (taken as a landscape feature by real estate advertising), and lost the emancipatory opportunities for people who would benefit greatly from strengthening cities as new centralities (services, equipment and rights) and thus bring about endogenous development with their ancient knowledge (social capital) on how to manage natural resources (environmental capital).

In sum, the evidence provided in this paper supports the idea that the right to the city needs to encompass the right to nature, given its role in the production, sociability and leisure of the 'invisible' social groups. The proposal of extensive naturalisation (the coexistence of urban and natural) stretches far beyond greening and indicates that there are a knowledge gap and a need to develop concepts that could allow peripheral areas to transform previous disadvantages into an emancipatory opportunity. This is not a romantic out-of-date ideal, but rather a vision that new technologies (social and physical) are needed to improve successful and durable solutions.

The search for modernisation and economic expansion by the private and public sectors often neglects the circumstances of people. Changes in public policies are targeted towards supporting a hegemonic modern industrial paradigm and fail to consider successful traditional arrangements and their long-term positive outcomes. Currently, public policies function more as an accelerating force to become incorporated into capitalist rationality, by introducing formulas created in global cities simplified for common cities. However, from an Amazonian perspective, it is possible to state that another form of urbanisation could be possible, based on respecting diversity, where instead of just enabling alienated consumption, cities could promote citizenship for all, both in or outside the domains of the cities.

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