doi:10.1068/d13128p

On the peripheries of planetary urbanization: globalizing Manaus and its expanding impact

Juan Miguel Kanai

Department of Geography and Regional Studies, University of Miami, 1000 Memorial Drive, Coral Gables, FL 33124-2221, USA; e-mail: miguelkanai@miami.edu Received 23 September 2013; in revised form 8 July 2014; published online 26 August 2014

Abstract. In this paper I argue that global urbanism produces peripherality in ways that cannot be adequately problematized without taking into account its actual extent and geographically uneven development. Therefore, planetary urbanization needs to engage scholarly traditions attuned to regional urbanization if the discourse is to move past limitations in the urban globalization canon and its narrow focus on cities. To that end, I examine research on extensive urbanization in the Amazon region. Illustrative case studies show how attempts to globalize Manaus precipitated territorial restructuring and sociospatial change far beyond the city's boundaries. Manaus is now a more unequal city. Selective metropolitan expansion to the Rio Negro's south bank has led to the simultaneous upgrading and peripheralization of Iranduba. Yet, the building of a city-centric regional network of roadways also shaped Roraima State's transformation from isolated borderland to bypassed periphery. Moreover, financial and symbolic appropriations of standing rainforests by metropolitan conservationism marginalize remote communities even in the absence of exploitative deforestation and resource extraction. Final remarks emphasize the need for further research on the hybrid (urban-rural) conditions and functional articulations of distant-yet-impacted peripheries. Such efforts may broaden the political horizons of planetary urbanization by informing extensive contestations of entrepreneurial urbanism.

Keywords: planetary urbanization, critical urban theory, Amazon Rainforest, commodification of nature

Introduction

Studies of urban globalization need to pay more attention to the social production of distant peripheries. Current discussions focus excessively on local effects, limiting themselves to only the most easily identifiable urban conditions. Emerging research on planetary urbanization may benefit from a deeper engagement with urban research traditions more attuned to the extensive reach of urbanization processes, many of which emanate from the Global South. A good example is the contribution that Brazilian urban geographers have made to understanding Latin America's new ruralities, a multidisciplinary research arena that focuses on intensifying rural–urban linkages. In order to illustrate these arguments, the paper draws upon and expands the author's previously published case studies of extensive urbanization in the Brazilian Amazon (Kanai, 2013; Kanai and Oliveira, 2014). Undertaken in collaboration with urban geographers from the region mainly based at the Federal University of Amazonas and Federal University of Roraima, this research program focuses on understanding the characteristics and dynamics of the urban network in the Western Amazon portion of northern Brazil on the basis of detailed empirical analysis of both the larger nodes and the smaller yet functionally articulated settlements (Schor and Oliveira, 2011).

The research highlighted in this paper specifically focuses on the multiple scales of peripheralization that entrepreneurial efforts to upgrade the Manaus metropolitan economy have produced in the region. Undoubtedly, Manaus can be conceptualized as an unusual, yet also far from unique, narrative of state-sponsored urban globalization. Entrepreneurial interventions have sought to transform the city's relative isolation in the heart of the Amazon Rainforest into a locational advantage. Whereas Manaus is the preeminent regional metropolis, public and private initiatives now aim to achieve a competitive position within national and global city networks. This paper traces attempts to develop an ecological specialization— both material and symbolic—and leverage the planetary relevance of remaining rainforests that cover vast hinterlands. Yet this process has also triggered extensive regional restructuring and transformative sociospatial impacts, which help demonstrate the need for a broader theorization of urban peripheries under conditions of planetary urbanization.

The paper is organized into five sections and a conclusion. The first section develops the main theoretical arguments, stressing the need for more inclusive definitions of urban peripherality. The emerging literature on planetary urbanization is identified as a promising approach to these questions, but is also critiqued in terms of its political horizons. The paper proposes more explicit dialogue with lesser-known research traditions from the Global South as a possible way forward. The second section reviews the growth trajectory of metropolitan Manaus, problematizing the exclusionary dimensions of current forms of urban entrepreneurialism. The third section engages selective metropolitan expansion demonstrating how newly built infrastructure, particularly the Manaus-Iranduba Bridge, has begun to transform the Rio Negro's south bank, where urban upgrading and peripheralization are concurrent. The fourth section discusses the Manaus-centric character of regional roadway building. The discussion focuses on the transformation of Roraima State from isolated borderland to a periphery bypassed and exploited by transnational networks and flows. The more exploratory fifth section argues that even with deforestation curbed, remote rainforests continue to be urbanized in contradictory ways. Nature increasingly becomes part of citycentric accumulation strategies. Manaus, the capital and urban core of Amazonas State, achieves an ever more privileged position over disadvantaged hinterlands. The conclusion discusses how questions of peripherality may render planetary urbanization more political by informing broad-based justice coalitions. In turn, these may be better able to challenge the spatial elitism and exclusions of entrepreneurial global city interventions.

The emerging peripheries of planetary urbanization

Critical understandings of urban peripheries converge on the definition of these geographies as functionally articulated to, but largely devoid of, the benefits of city nodes, therefore being undervalued by market calculation and often underserved by public policy. Yet, the discussion should not be limited to older, disinvested, decayed, and often stigmatized inner cities, which are still the focus of much empirical urban globalization research in the Global North. There is increasing awareness that marginalized sites of urbanization are also produced on metropolitan peripheries that due to the lack of comprehensive planning develop haphazardly as the not always intended result of infrastructure and market expansions. These represent the shifting boundaries of contiguously urbanized areas, often subject to sprawl and informal growth. Moreover, in the context of planetary urbanization debates, it is critical to realize that, in their least frequently identified manifestation, urban peripheries may even be produced in remote locations. Despite long distances and topographical variation, these can no longer be assumed to lie beyond the reach of spatial effects generated by urban cores. Providing the functional articulation between the two are expansive networks of connective infrastructures and mobile practices, which operate at a planetary scale and deepen geographically uneven development. In fact, various circuits of unequal exchange are designed to favor select city nodes over nearby and distant peripheries.

Urban peripherality has been problematized in the past and the intent of this paper is not to deny but to extend the work of several critical geographers who have set the analytical framework to interpret urbanization as part of the geographically uneven development of capitalism (Harvey, 1985; Smith, 1984; Soja, 1989). The logics of capital accumulation and the need for spatial fixes structure and restructure urban space unequally, generating multiple sociospatial marginalizations and exclusions. Yet, this paper's main critique of previous work is that the specification of what constitutes an urban periphery has been rather limited in its geographical imagination and empirical engagements. Deteriorating and racialized inner cities in the US and UK as well as the French banlieues conflating problems of immigrant integration and economic exclusion are some of the most commonly revisited references (Dikeç, 2007; Gough et al, 2006). These limitations are also found in urban research in the Global South. A good example appears in Holston's (2009) otherwise highly insightful paper on insurgent forms of citizenship in urban Brazil. Holston (page 245) limits his discussion to "impoverished urban peripheries in various conditions of illegal and irregular residence, around urban centers that benefit from their services and poverty". Furthermore, such a restricted understanding of the extensive relationality of urbanization processes and their discontinuous spatial effects may also be precluding a full recognition of potential resistances and insurgencies. These are easily overlooked when the narrative assumes a "remarkably similar condition worldwide" (page 245).

The dynamics of regional urbanization in the Western Amazon provide useful illustrative examples of hybrid and heterogeneous peripheries, which are emerging throughout the region's vast territory. Yet these conditions are not to be seen as unique to Brazil or even limited to Latin America. For example, they also occur in many other settings in the Global South, where inheritances from the preindustrial agrarian past exhibit more conspicuous territorial inscriptions and the urbanism of earlier modernization processes was more partial and selective. To skeptics, the geographies that this paper problematizes through the lens of extended urban peripheries may not represent more than largely isolated towns, hamlets, or even undeveloped territories, which are best captured analytically using rural concepts and should definitely fall beyond the remit of global urban research. In fact, rather than urban studies, it is geographers and other researchers on rural problematics who have most explicitly begun to draw attention to the rapid sociospatial transformations associated with extensive planetary urbanization, in both the Global North and South (Hancock, 2009; May, 2011; Woods 2009; 2007). Yet, what Bunnell and Maringanti (2010) call 'metrocentricity' or a methodological bias toward the largest and most conspicuous metropolitan realms persists in current research on urban globalization. This limits the field's scope of empirical inquiry and theoretical development. Wachsmuth (2012) uses the phrase 'methodological cityism' to draw attention to the need for a broader understanding of urbanization processes beyond the scholarly canon centered on easily distinguishable city terrains with impervious borders of assumed rigidity.

The emerging literature on planetary urbanization provides a promising impetus to broaden the scope of inquiry (Brenner and Schmid, 2013; Monte-Mór, 2005; Soja and Kanai, 2007). Predicated on Lefebvre's (2003) original thesis on the total urbanization of society and its inevitability, these writings posit that urbanization has entered a new phase of unprecedented reach, thereby requiring novel theorizations as to what constitutes the urban. Soja and Kanai (2007, page 54) explain that urbanization processes are not subordinate to globalization but are a primary, constitutive vector aimed at the systemic integration of the planet. Such processes result in strategically located urban agglomerations exhibiting not only unprecedented size but also increasing complexity and cosmopolitan heterogeneity—newcomers may migrate from the world over. But, in a dialectic move, such connectivity also helps the city to reach everywhere, thereby spreading spatial impacts of economic, social, cultural, and environmental transformation across ever more extensive territories. Conceptualizing the dialectic further, Brenner and Schmid (2014) point out that

urbanization implicates interrelated moments of concentration and extension. Whereas most urban studies focus on the former, through their concern with sites of agglomeration and clustering, this misses the point that "agglomerations form, expand, shrink and morph continuously, but always via dense webs of relations to other places, whose historical patterns and developmental pathways are in turn mediated ever more directly through their modes of connection/disconnection to the hegemonic zones of urban concentration" (page 20).

In his work on the politics of the encounter, Merrifield (2013) notices the usefulness of planetary urbanization to question overly narrow notions of urban centrality. This is particularly the case for 'right to the city' claims, as they have been commonly formulated by progressive social movements and researchers. Demonstrating awareness of geographically uneven development, Merrifield rightly captures the folding of rural space into new urbanization processes. He points out that fractures now run through cores and peripheries rather than between idealized settlement types (pages 914–915). Yet, the unprecedented extent of planetary urbanization dumbfounds Merrifield, as he confuses it with *formlessness* in *boundless space*. Thus, his political formulations lose any geographic grounding as he vaguely calls for encounter as a remedy for separation and segregation. Therefore, in response to Merrifield's question on how one can claim any rights to city-ness when urbanization occurs everywhere, this paper proposes the problematization of distant (as well as nearby) urban peripheries.

Engaging the actual extent of urban peripheralization is a necessary step in the specification of geographically uneven development under planetary urbanization. Understanding the social production of urban peripheries may begin to elucidate innovative forms of solidarity and political organizing across territorialized differences, distances, and disconnections. Therefore, it is paramount not to discuss disadvantaged geographies in isolation and the restrictive terms of their social topographies—as complex, insightful, and moving as these may be. Instead, spaces of marginalization need to be positioned in the relational webs that produce urban systems, paying particular attention to how interventions to strengthen city nodes may also produce distanciated yet consequential impacts on surrounding areas and bypassed territories. In other words, it is crucial to realize that contemporary urban peripherality resides largely in the subordinated status that a multitude of places occupy within state-sponsored territorial projects to constitute and strengthen urban centralities of global relevance.

Several subfields of urban globalization research have shed light on the origins and modalities of such elite actions of state and economic power in various world-regional contexts. Writings on entrepreneurial cities discuss the heightened interplace competitiveness in the context of reconfigured territorial states and the emergence of market-centric regimes of urban governance, topics that are further analyzed by the literature on urban globalization and neoliberal urbanism. (Brenner and Theodore, 2002; Kanai and Kutz, 2013; Moulaert et al, 2003; Roy and Ong, 2011). Other studies of networked and mobile urbanism help us to understand how selectively articulated networked infrastructures and mobility practices enact flows and transfers across privileged nodes while creating tunneling effects to bypass peripheral territories (Graham and Marvin, 2001; McCann and Ward, 2011). On the one hand, neoliberal, networked, and mobile urbanisms provide essential explanations for the underlying mechanisms of the social production of urban peripheries, and therefore advance the theoretical specification of planetary urbanization and its geographically uneven development. On the other hand, the unprecedented extension of city-based spatial effects needs to be ascertained further within these approaches in order to probe their explanatory purchase and expand their empirical foci.

Furthermore, if planetary urbanization is to truly broaden the field of urban globalization studies, the discourse needs to converse more substantially with works beyond the extant canon and the Eurocentric parochialisms that propitiate a categorical segmentation of comparative studies (Robinson, 2002; 2011). The research on extended urbanization in the Amazon region presented herein is consistent with Brenner's call to investigate 'extreme territories' of urbanization previously assumed to fall in the 'constitutive outside' of cities (see his lecture discussing these issues at length, http://www.youtube.com/watch?v=xTk2aRFIKus). But the work is theoretically anchored in the insights that Brazilian urban geographers have developed on the extensiveness of contemporary urbanization, which are stated the most clearly by Santos's (2005) assertive positing of the urban in the rural. In specific reference to the expansive regionality of Amazonian urbanization, Corrêa (2004, pages 181–254) set the theoretical bases for its conceptualization as a historically evolving urban network. Shaped by multiple and shifting linkages with both the Brazilian core and the world economy, this unevenly developed yet functionally articulated network has evolved at different speeds, further differentiating primate city nodes, economically specialized towns, and small riverine settlements. Moreover, since the mid-20th-century era of developmental high industrialism, Becker (1995) argues, urbanizing populations, growing settlements, and proliferating infrastructure networks (extensive regional roadways in particular) have created the conditions for the Amazon to be accurately understood as an 'urbanized forest' in which urban settlements should not be planned in isolation but in terms of joint regional futures. Moreover, this research is only one of many debates on Latin American new ruralities, which have produced a rich body of scholarly inquiry demonstrating the intensification of urban-rural functional linkages and the broad extents and implications of sociospatial transformations (Hecht, 2010; Kay, 2008; Ruiz Rivera and Delgado Campos, 2008).

Multiple other examples could be cited from throughout the Global South to demonstrate how researchers have noticed the impacts of extensive urbanization on (erstwhile) rural and even forested zones. Research on the urban-rural continuums of South, Southeast, and East Asia has produced globally influential concepts such as McGee's (1991) desakota (village-city). Works by scholars such as Jones (1997) and more recently Thompson (2007) demonstrate the ongoing vibrancy of this line of research, which helps to theorize varying regional urbanization conditions less dichotomously, and continues to assert that "The rural and the urban are at once divided and connected" (Thompson et al, 2013, page 1). This not only constitutes a healthy counterweight to the still predominant notions of city-countryside cleavage but also provides an explicitly urban nuance to questions of hybridity, which are otherwise largely theorized across the nature-culture axis (Whatmore, 2002). On questions of sociospatial appropriations and exclusions 'beyond the city', research on 'fortress conservation' (originally focused on cases from Sub-Saharan Africa) demonstrates how indigenous and traditional communities in forested areas have been marginalized by strict conservation measures that increasingly bar them from access to all local resources and thereby impede their livelihoods (Brockington, 2002; Brockington et al, 2008; West et al, 2006). This paper will begin to show how this problematic can in fact be contextualized by planetary urbanization and help to better specify it.

Finally, the paper's argument of metropolitan biases should be read not as a blanket statement on urban research in the North Atlantic Basin but as a precise critique of the urban globalization field. In North America questions of regional urbanization have been amply dealt with in the past. Outstanding studies on the manifold linkages between core cities, regional economies, and resource-extraction spaces include those by Cronon (1992) and Walker (2001). Yet the planetary urbanization literature is only now beginning to reinvigorate this approach and explore its potentials in specific reference to the massive extent and

reach of contemporary urbanization at a global scale. For example, in his insightful essay Meili (2006) discusses the material and symbolic dimensions to the urbanization of Swiss Alpine space. For Meili (page 920) "all the regions that we once categorized as 'nature' have ultimately become part of the city" as a consequence of the unprecedented expansion of urban topography—which we could alternatively name 'urban fabric' or 'urban tissue' following the original Lefebvrian terminology (see Merrifield, 2013, page 911). Undoubtedly, a material transformation has occurred, including the expansion of transportation networks and proliferation of city-based architectures, lifestyles, and technologies-such as the use of traffic management devices on mountain roads and the selective social-networking schemes of conferencing and seasonal event planning in resorts. Yet Alpine urbanization is more complex, also comprising the multiplication of symbolic meanings and appropriations of mountainous terrains. Although these are often conflict-generating to a level indistinguishable from the contradictions traditionally associated with dense city space, Meili (2006, page 921) points out that "The Alps are marketed as a variation of the city within a different context but also as icons of compensation" which signify a distinctive Swiss natural landscape unfettered by the environmental impacts of extensive infrastructure networks.

In more general (albeit less explicitly urban) terms, Smith's (2007) work on nature as accumulation strategy helps us understand the broader mystification of natural landscapes as spaces cut out from (city-centric) social realities [see also Smith's (1984) earlier work on the production of nature]. With the rise of green capitalism and intensified demand for ecological services, Smith (2007, page 39) posits, "nature is more intensely integrated into capital as an accumulation strategy". This has implications for both the production and consumption of nature through, for example, carbon credits, ecotourism, and other material, financial, and symbolic appropriations that reach far beyond the harvesting of use values as raw materials registered in the early stages of industrialism. By linking the renewed conservation emphasis in the State of Amazonas to the governmental ambition to produce a world-class Manaus, the paper will hint at the importance of not only linking problematic conservation approaches to the needs of global capital and neoliberal logics but also embedding them in the sociospatially uneven processes of extensive and generalized planetary urbanization.

World-class Manaus: producing a global city within the planet's largest rainforest

This section discusses the economic profile of Manaus and the effort to upgrade and diversify its expanding metropolitan economy. The ambition to build a world-class urban hub is noteworthy: current plans seek to take advantage of the city's unique location at the heart of the Amazon Rainforest, historically viewed as the main obstacle to development (see figure 1 for the location of Manaus in northeastern South America). This discussion constitutes a necessary introduction to the arguments on urban peripherality developed below, because the concentration of investments and initiatives in metropolitan Manaus not only drain resources that could benefit other places in the Western Amazon region but also consolidate city-centric infrastructure networks and mobility circuits that channel resulting spatial impacts to nearby and distant peripheries.

For an international audience, the plausibility of Manaus as an urban hub of global relevance is the first issue to consider. State-sponsored ambitions to globalize the city may sound like an oxymoron to some observers. Unlike São Paulo and Rio de Janeiro, Manaus has received little attention in English-language studies of urban globalization [except Browder and Godfrey (1997)]. The 2012 dataset from the Globalization and World Cities Network on 'command and control centers' does not include Manaus in its list of over 430 cities—eight of which are located in Brazil (Data Set 26.5 produced by G Csómos, http://www.lboro.ac.uk/gawc/). Even at the national scale, metropolitan Manaus is far from the top five cities (and does not even rank among the top ten) when assessed with such





Figure 1. Map of Manaus's position in northeastern South America (source: author).

basic metrics as population and GDP. Yet the Brookings Global Cities Initiative includes Manaus in its analysis of Brazil's thirteen largest metropolitan areas, which account for 33% of the country's population and 56% of its GDP. In fact, Manaus ranks first in terms of GDP and employment growth between 1990 and 2012, substantially exceeding each nationwide average (Wilson and Prchal Svajlenka, 2012). Endorsing its meteoric rise, a national committee selected Manaus as one of only twelve host cities for the 2014 FIFA World Cup tournament. Thus Manaus became the only city deemed worthy of hosting such a high-profile international event in all of northern Brazil, the country's least developed macroregion. Commenting on this achievement, a senior planner for Amazonas State noted the city's international airport, urban infrastructure, well-developed hospitality industry, and

tourist attractions, which could not be matched by the competing candidacy of Belém, the historical urban gateway to the Amazon Basin.

The rapid economic expansion of metropolitan Manaus over the past two decades is largely explained by the success of the Manaus Industrial Pole (Polo Industrial de Manaus or PIM), which attracts foreign direct investment as well as manufacturers to undertake their final product assembly operations. The PIM model is predicated on the Manaus Free Zone (Zona Franca de Manaus or ZFM), a federal scheme based on tax exemptions and other fiscal incentives. These have been implemented since 1967 to help the city overcome its comparative disadvantages-particularly regarding its remoteness from leading domestic markets and accompanying high transportation costs. The ZFM is highly controversial beyond Amazonas for its alleged distortions to domestic markets, territorial competitiveness, and industrial location decisions. Critics from the heavily industrialized state of São Paulo are especially vociferous-former governor and once presidential hopeful José Serra most conspicuously represents these interests. Therefore, despite ongoing support from recent Brazilian presidents (including da Silva and Rousseff), the continuity of nationally legislated ZFM programs cannot be automatically assumed—they are presently set to expire by 2023 even though President Rousseff has proposed a 50-year extension that is still under discussion in Congress.

Moreover, this model has already survived a major crisis, followed by restructuring in the early 1990s in conjunction with the initial (neo)liberalization of the Brazilian economy and the drastic reduction of import tariffs and restrictions (Egler, 1993, pages 209–210). Those reforms undermined Manaus's erstwhile exceptional position in the otherwise closed economy of Brazil's import-substituting industrialization; competitiveness was regained only after drastic industrial restructuring and additional infrastructure investments as well as corporate concessions on the part of the federal, state, and local government (Botelho, 2006; Pereira, 2005). While it is still too early to tell, the recent global recession and its impacts on the Brazilian economy seem to have affected Manaus more than other metropolitan areas. Such combined pressures and uncertainties loom large in the explanation of emerging plans and initiatives to diversify the local economic base and promote higher-value-added activities in the city. Thus, the drive to create an advanced urban economy in Manaus is fueled by both the PIM's profitability and its obvious vulnerability.

A review of the emergence of ecological entrepreneurialism in Manaus (Kanai, 2013) shows that several initiatives have been launched since 1990 to reverse the city's unique locational qualities from a liability to an asset in an age of global environmental change, international pressures for mitigation measures, and the hegemony of market-centric urban regimes. Biotechnologies, ecotourism, the generation of carbon credits through greater conservation, and the promotion of vernacular cultural production appear prominently among the economic sectors and resource-generating activities that policy makers have experimented with. The governmental discourse also attempts to recast the historical geographies of Amazonas State's extremely uneven development. This trajectory is narrated as a deep-seated effort to protect the state's rainforests by tightly clustering population and economic activity in Manaus, the powerful capital (Pazuello, 2010). Thus current policies are justified as part of ongoing efforts to continue benefiting both the primate city and the rest of the vastly underdeveloped state, when in fact an additional concentration of resource investment and infrastructure-building further privileges Manaus in its quest to become a metropolis of global relevance.

Intensified public investments and overheated real estate markets have intensified social inequalities in the city as certain neighborhoods upgrade and appreciate much faster than the rest (Oliveira and Schor, 2009). Gleaming condominium towers and glamorous shopping malls stud the most desirable districts in a fragmented cityscape in which most

of the remaining districts lack even the most basic services. Bartoli (2011) points out that in the rapidly expanding sector west of the international airport and north of the luxurious Ponta Negra enclave, the lax enforcement of land-use regulations has allowed private actors to appropriate premium waterfront spaces. Whereas upscale gated communities enclose the most coveted environmental amenities, public waterside access is increasingly relegated to the socially marginalized and ecologically degraded segments of the shoreline. There is also reinvestment at the core: initially timid interventions to restore the 'belle epoque' historic center (built by the rubber barons of the time) have given way to much larger programs of environmental restoration and urban renewal. Although internationally praised as successful governmental interventions, such programs have been criticized for their dislocation effects. For example, Lima da Silva and Castro de Lima (2008) point out that even though provided with slightly better housing units, many residents were relocated to peripheral areas devoid of basic municipal services. Lacking in local employment opportunities, these areas are also poorly served by public transportation. Yet, as the following three sections will show, the social production of urban peripherality extends much farther than the conspicuously transformed urban core.

Manaus pushes outward: state-sponsored metropolitan expansion and its exclusions

During the economic boom of the mid-2000s Manaus seemed to be running out of space. Hardly any properties were left for new firms to relocate to the industrial district, and northward sprawl increasingly encroached on forested land (Laurance, 2000, page 116). But plenty of space was available just across the Rio Negro, the Amazon's largest tributary, which joins the trunk river at Manaus—the sparse settlement patterns of Iranduba, Manacapurú, and Novo Airão were dominated by small towns, cottage industries, and agricultural land use. Yet connections to Manaus were poor, with traffic dependent on a slow and costly ferry service. To change this situation, Amazonas State initiated a process of major urban expansion into this outlying area. In 2007 the state legislature designated a metropolitan region around the capital, and the governor soon announced the construction of a bridge between Manaus and Iranduba—apparently without comprehensive planning, public debate, and consensusbuilding (Castro, 2012, page 63). Opened with much fanfare in October 2011 (almost a full year behind schedule), the almost 4-km-long bridge symbolizes the region's newly gained confidence in its economic potential while continuing to stoke environmental concerns (Carrington, 2010). The newly created metropolitan region also remains controversial in its role as the selected institutional vessel for spatial planning and territorial development. Among other issues, the Manaus Metropolitan Region (Região Metropolitana de Manaus or RMM) demarcated its jurisdictional extent arbitrarily over a territory in which minimal functional linkages existed between the core city and its almost completely undeveloped surroundings (Kanai, 2013). However, the aspect of this process that is most relevant to the present discussion is the problematic transformation of places that are now more directly connected to Manaus by the new bridge. The production of urban peripherality is most evident in Iranduba, where the fastest growth has been generated.

In order to gain support for the bridge's construction, RMM planners promised not only economic benefits but also orderly development to constituencies on the south bank of the Rio Negro (Prazeres, 2011). The proposed plan featured growth corridors along the few paved roadways leading to Manacapurú and Novo Airão. These would contain most of the new housing, industrial, and commercial developments within a compact buffer well served by the new infrastructure and thereby prevent rampant deforestation (page 282). However, the most thorough land-use proposals were formulated for a 100 km² 'zone of metropolitan interest' on Iranduba's shoreline (running 10 km on each side of the bridge and extending 5 km inland). This zone featured several different land-use complexes specially designed to

both preserve unique environmental conditions and maximize direct access to central Manaus (page 275). Among these complexes, the 'residential and tourism zone' (*Zona Residencial e de Turismo* or ZRT) is of particular interest (page 284). Occupying the zone's northwestern quadrant, the ZRT would be punctuated with waterfront condominiums and resorts, which could be expected to be as upscale and exclusive as those in the Ponta Negra district, assuming repetition of the north bank's development trajectory.

Whereas the promise of compact development corridors may not fully materialize due to the construction surge that followed the bridge's opening to vehicular traffic (Lima, 2011), the ZRT has nevertheless begun to take shape with the decision to relocate the Amazonas State University's (Universidade do Estado do Amazonas or UEA) main campus here. Slated to occupy 13 km², the campus will contain far more than academic, research, and administrative activities. In fact, in the master plan unveiled in mid-2012 the UEA occupied only a small portion of the zone's total extent, sharing the development with more than twenty-five other complexes. These will include a high-rise residential compound, numerous other housing complexes, technological as well as business and cultural districts, a shopping mall, a restaurant cluster, and even a zoo and theme park—all conveniently nested between the UEA (the campus to function as a cordon sanitaire buffering against informal sprawl?) and the river, and with condominium towers designed to face the water directly. Reaffirming the development's intended elite character, a finely scaled model was put on display not at the existing UEA headquarters but at the Manauara shopping mall. This is one of the most prestigious spaces of consumption in central Manaus, where stores feature an array of luxury goods, including the latest premium real estate packages.

The realities that metropolitan expansion has imposed on many of Iranduba's original residents vary enormously. With the bridge in operation, the old ferry service became obsolete overnight. The collapse of this activity particularly impacted its port base in Cacau Pirêra and the surrounding communities where more than 18000 people reside. Media reports show that in addition to skyrocketing unemployment rates these areas face decreasing levels of public service and multiple insecurities, to which residents respond with intensifying protests—even attempting forceful interruptions to Manaus-bound vehicular traffic (Silva, 2012). More academic research is clearly needed to monitor Iranduba's development in the near future. Sousa (2011) provides a guide to the issues that may become the most pressing, unsurprisingly noting that real estate investors rushed to Iranduba even before the bridge's completion (page 75). The speculation stampede resulted in sharp land value increases: in 2007 plots were available in the urbanized area for R \$7000, by 2010 plots in a less accessible location could cost as much as R\$15000, even without connections to the local electric grid (page 78). Moreover, by analyzing the previous experiences of erstwhile undeveloped areas being restructured by a newly built surface link, Sousa posits that in addition to a rapid demographic expansion, Iranduba may expect: (a) a deterioration of already precarious conditions due to heightened industrial and commercial activity; (b) worsening congestion and more traffic accidents; (c) higher levels of violent crime and homicides; (d) enlarged residential demands for public services; and (e) consumer price inflation, with local supply unable to keep up with increasing demand.

Therefore, while state actors invest conspicuously in the production of elite urbanism in select spaces, prospects for the rest of Iranduba and the surrounding region on the Rio Negro's south bank are far less rosy—particularly if the lack of adequate governmental responses to already impacted areas such as the Cacau Pirêra communities serves as an indication of future policies. Moreover, the state-condoned social production of urban peripheries cannot be assumed to occur only in less-accessible locations. Sousa (2011, page 74) shows that communities along the route of a pipeline recently built between Coarí and Manaus have

not benefited from the liquid natural gas now flowing toward the capital. Indisputably, the promised local investments have not been made along the 380-km-long corridor. A similar form of bypassing occurs along the longer BR-174 roadway corridor linking Manaus with the international border with Venezuela, which is discussed in more detail in the section below.

The case of Roraima—a periphery bypassed by transnationalism, not an isolated borderland

The primacy of Manaus as the sole metropolis in the vast territory of Brazil's Western Amazon region extends far beyond the borders of Amazonas State. Dependency on the city's regional centrality is especially evident in Roraima (IBGE, 2008, page 163), Brazil's northernmost state tucked between Amazonas and the triple frontier with Venezuela and Guyana. This section will show that the momentous investments in road building since the late 1990s have produced unprecedented connectivity yet still maintained, or even increased, the peripherality of this most remote borderland state. With the completion of the 700-km-long BR-174 project in 1998, for the first time in history Roraima was served by a major federal roadway that cuts across the state from north to south. Nevertheless, only a few of the expected regional development processes have materialized.

Conceived at a time of crisis for the industrial competitiveness of Manaus (discussed above), the project focused on improving the city's international surface linkages. According to the prevalent market-centric transnationalism of the 1990s, exports could be promoted by taking advantage of the hemispheric and global accessibility offered by ports on the Caribbean Rim. BR-174 was touted as the most important Amazon roadway project during the early years of Fernando Henrique Cardoso's presidency and demonstrated a shift of government priorities for the region—from national integration to transnational articulation. While exports have not increased as expected, the goal of strengthening Manaus's pan-Amazonian focality remained a priority for the subsequent federal transportation-planning and road-building investments made in the region. A case in point is the multilateral Initiative for the Integration of the Regional Infrastructure of South America led by Brazil to improve connectivity of regional infrastructure across the continent's national borders (Castro, 2012).

Roraima's nascent urban system remains firmly anchored on Boa Vista, the state capital and primate city. The centripetal forces that had dominated traditional urbanization seemed to be receding in the 1980s and early 1990s. Since then, however, they have again prevailed, deepening the stark demographic and economic imbalances between Boa Vista and the rest of the state (Diniz, 2008). The federal government plays a critical role in sustaining the city's economy through public employment. Over the past decade federal policies have also cemented Boa Vista's centrality in the border zone, mainly by strategic investments in roadway upgrades (the paving first of BR-174 and then BR-401 to the border with Guyana) and fiscal benefit schemes-the latter modeled on the initiative implemented in Manaus decades earlier. Boa Vista was designated as a free-trade area (Area de Livre Comércio or ALC) and an export processing zone (Zona Processamento de Exportação or ZPE) was to be built in the city. Beginning with exemptions on import tariffs and excise taxes in 2008, ALC has resulted in a modest reduction of local consumer prices, thereby stimulating considerable growth in commercial activity (Albuquerque, 2011). However, by the early 2010s the ZPE had yet to be implemented, as the project's proponents blamed the delays on regulatory inertia and the lack of investments in land and infrastructure (Rodrigues, 2012). Meanwhile, economic dynamism came from the private sector, particularly from outside investors. National retail chains began opening local franchises and developers from out of town undertook prominent housing projects. Staevie (2011) points out that, compounding local governmental neglect, these interventions intensify the city's visible sociospatial inequalities: they focus on a

1082

small upmarket segment of the population concentrated in select areas while large swaths of disadvantaged neighborhoods remain poorly planned and underserved.

The latest research affirms that increased regional and international connectivity have produced few benefits for Roraima's smaller settlements, even those located directly on the BR-174 pathway (Kanai and Oliveira, 2014). Focusing on the heterogeneous mobilities of daily life that have emerged along the upgraded roadway now linking Manaus to South America's northern coast, this study shows that many of the newly enabled flows bypass Roraima or, worse, prey on local vulnerabilities—the most conspicuous example being the exploitive sex trade that thrives along interstate and international roadways (Oliveira, 2012). Therefore, even though the spatial effects produced by the rise of select areas in Manaus to a higher status within the global urban hierarchy may be more tenuously felt hundreds of kilometers away in the neglected places of Roraima State, conceptualizing these as urban peripheries helps to locate them within vastly transformative processes of extended urbanization, which are profoundly skewed in their privileging of certain city cores at the expense of inclusive regional development. The extremes of geographically uneven development under planetary urbanization may be better differentiated from traditional rural poverty when researchers begin to map out the full extents of city-centric infrastructure networks and then carry out detailed observations of their overall impacts and actual social uses.

The urbanization of remote rainforest communities

Urbanization becomes a much more encompassing notion when understood in terms of functional articulation and extensive spatial impacts rather than in terms of commonly used criteria of minimum density thresholds, land cover, and land-use typologies. The literature on planetary urbanization thus invites urban globalization research to broaden its horizons and rethink vast spaces of 'wilderness' previously left outside its purview as extreme territories that nevertheless are linked to and impacted by city-centric networks and flows (Brenner and Schmid, 2014). Illustrating the point, the Manaus-centric ecological entrepreneurialism of Amazonas State helps us understand how contemporary forms of environmental commodification, marketization, and financialization increasingly influence the social production of space in forested areas and shape their incorporation into the geographically uneven development of planetary urbanization.

In the early 21st century, attempts to upgrade the Manaus metropolitan economy have come to include policy experimentation with economic activities that leverage biodiversity and ecological services as exchange values. These include mechanisms to monetize the absorptive capacity of standing rainforests and even a proposal to create a specialized stock exchange in the city (Becker and Stenner, 2008, pages 103-118). Meanwhile, Amazonas State has rolled out plans and regulations alleged to strengthen its commitment to rainforest conservation and the sustainable development of remote, isolated hinterland communities. These include the creation of a Green Free Zone (Zona Franca Verde) program in 2003 to support sustainable value chains that could spread development to disadvantaged areas; the passing of landmark legislation regarding climate change in 2007, which legally enabled the state government to raise funds through international carbon-credit schemes and other market-based mechanisms to foster environmental protection; the establishment of a Forest Allowance (Bolsa Floresta) fund, first tapped in 2008 for communities located in environmentally sensitive areas to become partners in rainforest conservation; and the 2030 Strategic Development Plan unveiled in 2013. Local discontent with these interventions abounds. Furtado (2011) points out that investments and outlays are suspected to have been used to gain electoral leverage by hiring politically influential local leaders. Top-down cash transfer programs have been criticized also, for generating welfare dependency rather than

supporting autonomous development among traditional communities and for their excessive focus on the periurban fringe of Manaus (Porto, 2008).

Probing each program systematically through these claims would exceed the scope of this paper. Yet, as a whole, the panoply of new policies and their apparent flaws reveal that the extreme unevenness between the preeminent capital region and the rest of vast, largely undeveloped Amazonas State remains and may have indeed deepened. Moreover, new forms of city-centric appropriation and value-transfer are emerging, Manaus continues to grow on the back of disadvantaged hinterlands even if rainforests are left standing, and their populations are under less pressure to move to the city in the desperate search for industrial employment. State-run conservation units proliferate as symbols of an alternative to the excesses of metropolitan expansion and opportunities to attract global capital—the Marriott hotel chain, Coca Cola, and Samsung list among the corporations partnering with high-profile initiatives. Nature is convenient to the branding of Manaus's uniqueness as a world-class city and is increasingly glamorized by the private sector, for example in upscale city malls that engulf forest fragments and reproduce vernacular themes for the entertainment of their patrons. Meanwhile, vast forest areas are fortressed and their resident communities welfarized.

Planetary urbanization continues to unfold in complex patterns of territorial and technoeconomic restructuring. It generates novel socioenvironmental contradictions with a hybrid character of urban–rural–forest conditions. Boundaries are more blurred and conflicts the most intense on the shifting edges of metropolitan expansion. The institution of an antideforestation unit with an 'urban focus' in Iranduba is an example of how future research will need to pay attention to the state management of both rainforest conservation and sustainable metropolitan expansion as the two become more deeply intertwined (Prazeres, 2011). Whereas research evidence shows that ecological development has done little to benefit indigenous communities (Ribeiro et al, 2012), the proliferation of forceful removals of indigenous, traditional, or simply disadvantaged communities on the moving edges of metropolitan expansion prefigures intensified displacements and urban struggles even amid rainforests (Almeida et al, 2009; Ubinger, 2013).

Concluding remarks

This paper has discussed the overly narrow treatment that peripherality has received in urban globalization research to date. Studies of neoliberal urbanism, networked and mobile urbanization, entrepreneurial urban regimes, and other related notions are useful for shedding light on certain forms of economic development as well as physical restructuring undertaken by ambitious city elites all over the world. Mobilizing these concepts in a critique of initiatives to upgrade the Manaus metropolitan economy, the paper has demonstrated how these research tenets may be applied productively even within the highly distinctive context of Amazonian regional urbanization. Yet by also linking the upgrading of Manaus to problematic change on the metropolitan periphery, in connected yet bypassed regions, and even in remote and increasingly marginalized communities deep in the rainforest, it has been shown that much analytic potential is lost when the impacts of market-centric urban globalization are not traced up to their outermost limits and researchers disregard urban-rural linkages. The selective upgrading of urban cores needs to be linked not only to the production of excluded neighborhoods and metropolitan peripheries but also to the more extensive dynamics of regional restructuring as well as the wide reconfiguration of sociospatial conditions across vast territories. The emerging debate on planetary urbanization is highly promising for addressing these limitations, even though this discourse has yet to be fruitfully politicized.

The planetary urbanization discourse, in fact, could be rendered more cosmopolitan, and its political horizons widened, through more substantive dialogue with existing urban research traditions that have long been aware of the unboundedness and geographically uneven development of urbanization processes. A large number of examples from the Global South (and North) could be brought into the discussion beyond the specificities of Amazonian regional urbanization and Latin American interpretations of new ruralities (and urbanities) covered here. The next step in this research thrust is to identify both globally comparative cases and interpretive frameworks that may dialogue with and enrich planetary urbanization. More attention to Brazilian geographical thought could be particularly helpful. Those conversant in both Portuguese and English can testify how unbalanced the circulation of urban theory remains, with major contributions from the South yet to travel and make a lasting impact on the international scholarly arena. Some of the propositions and findings from studies of Amazonian regional urbanization that have been explicitly highlighted in this paper could contribute to efforts now being conducted elsewhere to theorize how urbanization in extreme territories generates a hybrid patterning and complex articulations.

Questions concerning extensive urbanization impacts and relational peripherality may help politicize planetary urbanization research and, in turn, inform the development of broad-based justice coalitions across vast territorial expanses and topographical variation. Continuing urban agglomeration is an undeniable engine of global economic prosperity, but challenges to the unjust distribution of benefits should not be scaled only within narrowly defined realms of city-ness. Planetary urbanization research can facilitate both encounters in a world integrated through urbanism and struggles against the spatial injustices of a globally integrated capitalist system that is profoundly characterized by geographically uneven development at multiple scales. Urban entrepreneurialism and other market-centric approaches to the social production of space should be a concern not only for cities. They also significantly impact those who inhabit much larger territories.

References

- Albuquerque C R V, 2011, "Áreas de Livre Comercio: o caso de Boa Vista", Master's thesis, Department of Economics, Federal University of Rio Grande do Sul, Porto Alegre, Brazil
- Almeida A W B, Santos G S, Lima L A P, 2009 Estigmatização e Território: Mapeamento Situacional das Comunidades e Associações Indígenas na Cidade de Manaus (Editora da Universidade Federal do Amazonas, Manaus, Brazil)
- Bartoli E, 2011, "Apropriaçao da terra urbana na cidade de Manaus: a natureza loteada no bairro Tarumã" *ACTA Geográfica*, doi: 10.5654/actageo2011.0001.0004
- Becker B K, 1995, "Undoing myths: the Amazon—an urbanized forest", in *Brazilian Perspectives* on Sustainable Development of the Amazon Region Eds M Clüsener-Godt, I Sachs (Parthenon, Paris) pp 53–90
- Becker B, Stenner C, 2008 Um Futuro Para a Amazônia (Oficina de Livros, São Paulo)
- Botelho A J, 2006 Redesenhando o Projeto Zona Franca de Manaus—Um Estado de Alerta (Uma Década Depois) (Valer, Manaus, Brazil)
- Brenner N, Schmid C, 2013, "The 'urban age' in question" *International Journal of Urban and Regional Research* **38** 731–755
- Brenner N, Theodore N, 2002 Spaces of Neoliberalism: Urban Restructuring in North America and Western Europe (Blackwell, Oxford)
- Brockington D, 2002 Fortress Conservation: The Preservation of the Mkomazi Game Reserve, Tanzania (Indiana University Press, Bloomington, IN)
- Brockington D, Duffy R, Igoe J, 2008 Nature Unbound: Conservation, Capitalism and the Future of Protected Areas (Earthscan, London)
- Browder J O, Godfrey B J, 1997 Rainforest Cities: Urbanization, Development, and Globalization of the Brazilian Amazon (Columbia University Press, New York)

- Bunnell T, Maringanti A, 2010, "Practising urban and regional research beyond metrocentricity" International Journal of Urban and Regional Research **34** 415–420
- Carrington D, 2010, "First Amazon bridge to open world's greatest rainforest to development" *The Guardian* 5 August,
 - http://www.theguardian.com/environment/2010/jul/29/manaus-bridge-amazon-rainforest
- Castro E, 2012, "Expansão da fronteira, megaprojetos de Infraestrutura e Integração Sul-Americana" *Caderno CRH* **25**(64) 45–61
- Corrêa R L, 2004 Estudos Sobre a Rede Urbana (Bertrand Basil, Rio de Janeiro)
- Cronon W, 1992 Nature's Metropolis: Chicago and the Great West (WW Norton, New York)
- Dikeç M, 2007 Badlands of the Republic: Space, Politics and Urban Policy (Blackwell, Oxford)
- Diniz A M A, 2008, "Fluxos migratórios e formação da rede urbana de Roraima" *Geografia* **33** 269–288
- Egler C A G, 1993 *Crise e Questão Regional no Brasil* PhD thesis, Campinas State University, São Paulo
- Furtado A, 2011, "MPE vai investigar a suposta existência de funcionários fantasmas no programa Zona Franca Verde" *A Crítica* 2 March,
- http://acritica.uol.com.br/noticias/MPE-funcionarios-Zona-Franca-Verde_0_436756323.html
- Gough J, Eisenschitz A, McCulloch A, 2006 Spaces of Social Exclusion (Routledge, London) Graham S, Marvin S, 2001 Splintering Urbanism: Networked Infrastructures, Technological
- Mobilities and the Urban Condition (Routledge, London)
- Hancock M, 2009, "DaksinaChitra: translating the Open-air Museum in Southern India", in *Re-shaping Cities: How Global Mobility Transforms Architecture and Urban Form* Eds M Guggenheim, O Söderström (Routledge, New York) pp 101–122
- Harvey D, 1985 *The Urbanization of Capital: Studies in the History and Theory of Capitalist Urbanization* (Johns Hopkins University Press, Baltimore, MD)
- Hecht S, 2010, "The new rurality: globalization, peasants and the paradoxes of landscapes" *Land Use Policy* **27** 161–169
- Holston J, 2009, "Insurgent citizenship in an era of global urban peripheries" *City and Society* **21** 245–267
- IBGE, 2008 *Regiões de Influência das Cidades 2007* Instituto Brasileiro de Geografia e Estatística, Rio de Janeiro
- Jones G, 1997, "The thoroughgoing urbanisation of East and Southeast Asia" *Asia Pacific Viewpoint* 38 237–249
- Kanai J M, 2013, "Capital of the Amazon Rainforest: constructing a global city-region for entrepreneurial Manaus" *Urban Studies*,
- http://usj.sagepub.com/content/early/2013/07/12/0042098013493478.abstract
- Kanai J M, Kutz W, 2013, "Entrepreneurial assemblages from off the map: (trans)national designs for Tangier" *Environment and Planning D: Society and Space* **31** 80–98
- Kanai M, Oliveira R S, 2014, "Paving (through) Amazonia: neoliberal urbanism and the reperipheralization of Roraima" *Environment and Planning A* **46** 62–77
- Kay C, 2008, "Reflections on Latin American rural studies in the neoliberal globalization period: a new rurality?" *Development and Change* **39** 915–943
- Laurance W F, 2000, "Mega-development trends in the Amazon: implications for global change" Environmental Monitoring and Assessment 61 113–122
- Lefebvre H, 2003 The Urban Revolution (University of Minnesota Press, Minneapolis, MN)
- Lima M, 2011, "Aumenta a procura de lotes por manauenses em Iranduba (AM)" *A Crítica* 7 December,
 - http://acritica.uol.com.br/noticias/Amazonia-Amazonas-Manaus-Boom-Imobiliario-Crescimento-Iranduba-AM_0_599340275.html
- McCann E, Ward K, 2011 *Mobile Urbanism: Cities and Policymaking in the Global Age* (University of Minnesota Press, Minneapolis, MN)
- McGee T G, 1991, "The emergence of 'Desakota' regions in Asia: expanding a hypothesis", in *The Extended Metropolis: Settlement Transition in Asia* Eds N Ginsburg, B Koppel, T G McGee (University of Hawaii Press, Honolulu, HI) pp 3–26

- May S, 2011, "Ecological urbanization: calculating value in an age of global climate change", in *Worlding Cities: Asian Experiments and the Art of being Global* Eds A Roy, A Ong (Wiley-Blackwell, Chichester, Sussex) pp 98–127
- Meili M, 2006, "Theory", in *Switzerland: An Urban Portrait* Eds R Diener, J Herzog, M Meili, P de Meuron, C Schmid (Birkhäuser, Basel) pp 920–927
- Merrifield A, 2013, "The urban question under planetary urbanization" *International Journal of Urban* and Regional Research **37** 909–922
- Monte-Mór R L, 2005, "What is urban in the contemporary world?" *Cadernos de Saude Publica* **21** 942–948
- Moulaert F, Rodríguez A, Swyngedouw E, 2003 *The Globalized City: Economic Restructuring and Social Polarization in European Cities* (Oxford University Press, Oxford)
- Oliveira J A, Schor T, 2009, "Manaus: transformações e permanências, do forte a metropole regional", in *Cidades na Floresta* Ed. E Castro (Annablume, São Paulo) pp 41–98
- Oliveira R S, 2012, "Las redes de prostitución y tráfico de mujeres en la Frontera Brasil–Venezuela por las carreteras BR-174 y Troncal 10" *Espacio Abierto* **21** 325–343
- Pazuello J, 2010, "Modelo ZFM é destaque no Fórum Internacional de Sustentabilidade" *SUFRAMA Noticias* 27 March, http://www.suframa.gov.br/suf_pub_noticias.cfm?id=9065
- Pereira D, 2005 Amazônia Insustentável: Zona Franca De Manaus: Estudo e Análise (Valer, Manaus, Brazil)
- Porto E, 2008, "Após oito meses, Bolsa Floresta é polemico" *BBC Brasil.com* 8 May, http://www.bbc.co.uk/portuguese/reporterbbc/story/2008/05/080513_blosafloresta1_ep_pu.shtml
- Prazeres L, 2011, "A ponte da discórdia" *Rolling Stone* number 62, November, http://www.rollingstone.com.br/edicao/edicao-62/ponte-da-discordia
- Ribeiro E M, Machado A L S, Oliveira E C, Nascimento E P, 2012, "The communities in the margins of sustainability: a look at the Iranduba Ecotourism Pole in Amazonas, Brazil" *Revista Brasileira de Ecoturismo* **5** 11–26
- Robinson J, 2002, "Global and world cities: a view from off the map" *International Journal of Urban* and Regional Research **26** 531–554
- Robinson J, 2011, "Cities in a world of cities: the comparative gesture" *International Journal of Urban* and Regional Research **35** 1–23
- Rodrigues E P, 2012, "Receita Federal aprova projeto de alfandegamento da ZPE Boa Vista" *Folha de Boa Vista* 14 December, http://www.folhabv.com.br/Noticia_Impressa.php?id=142356
- Roy A, Ong A, 2011 *Worlding Cities: Asian Experiments and the Art of Being Global* (Wiley-Blackwell, Malden, MA)
- Ruiz Rivera N, Delgado Campos J, 2008, "Territorio y nuevas ruralidades: un recorrido teórico sobre las transformaciones de la relación campo-ciudad" *EURE* **34** 77–95
- Santos M, 2005 A Urbanização Brasileira (Edusp, São Paulo)
- Schor T, Oliveira J A, 2011, "Methodological thoughts on the study of the urban network in the state of Amazonas and perspectives for the analysis of cities in the Brazilian Amazon region" *ACTA Geográfica*, doi: 10.5654/actageo2011.0001.0001
- Silva C, 2012, "Moradores do Cacau Pirêra (AM) estão preocupados com o descaso: o distrito foi esquecido pelas autoridades após abertura da ponte Rio Negro" *A Crítica* 30 March, http://acritica.uol.com.br/noticias/Moradores-Cacau-Pirera-AM-preocupados-Manaus-Amazonas-Amazonia_0_673132681.html
- Silva S L, Lima M C, 2008, "Impactos socioespaciais da intervenção urbana aos Ribeirinhos da Cidade de Manaus–AM", paper presented at the 4th Meeting of the National Association of Postgraduate Studies and Research on Environment and Society, 4–6 June, http://www.anppas.org.br/encontro4/cd/ARQUIVOS/GT8-1070-1043-20080509215031.pdf
- Smith N, 1984 Uneven Development: Nature, Capital, and the Production of Space (Blackwell, Oxford)
- Smith N, 2007, "Nature as accumulation strategy" Socialist Register 16 19-41
- Soja E W, 1989 Postmodern Geographies: The Reassertion of Space in Critical Social Theory (Verso, London)
- Soja E, Kanai M, 2007, "The urbanization of the world", in *The Endless City* Eds R Burdett, D Sudjic (Phaidon, London) pp 54–69

- Souza I S, 2011, "Grandes Projetos na Amazônia: Mudanças e Perspectivas na Produção do Espaço Urbano em Iranduba–AM" ACTA *Geográfica* **5** 71–80
- Staevie P M, 2011, "Expansão urbana e exclusão social em Boa Vista—Roraima" *OCULUM ENSAIOS* **13** 68–87
- Thompson E C, 2007 *Unsettling Absences: Urbanism in Rural Malaysia* (National University of Singapore Press, Singapore)
- Thompson E C, Bunnel T, Parthasarathy D (Eds), 2013 *Cleavage, Connection and Conflict in Rural and Urban Asia* (Springer, Heidelberg)
- Ubinger H F , 2013, "'Deus é por Nós'—urban land occupied by indigenous people in Iranduba, Brazil is repossessed by police authorities", Nova Cartografia Social da Amazônia, Manaus, http://novacartografiasocial.com/deus-e-por-nos-urban-land-occupied-by-indigenous-people-iniranduba-brazil-is-repossessed-by-police-authorities/
- Wachsmuth D, 2012, "Three ecologies: urban metabolism and the society-nature opposition" *The Sociological Quarterly* **53** 506–523
- Walker, R A, 2001, "California's golden road to riches: natural resources and regional capitalism, 1848–1940" *Annals of the Association of American Geographers* **91** 167–199
- West P, Igoe J, Brockington D, 2006, "Parks and peoples: the social impact of protected areas" *Annual Review of Anthropology* **35** 251–277
- Whatmore S, 2002 Hybrid Geographies: Natures, Cultures, Spaces (Sage, London)
- Wilson J, Prchal Svajlenka N, 2012, "Metro Brazil: an overview of the nation's largest metropolitan economies", The Brookings Institution, Washington, DC, http://www.brookings.edu/~/media/research/files/papers/2012/11/30%20metro%20brazil%20 economy/overview.pdf
- Woods M, 2007, "Engaging the global countryside: globalization, hybridity and the reconstitution of rural place" *Progress in Human Geography* **31** 485–507
- Woods M, 2009, "Rural geography: blurring boundaries and making connections" *Progress in Human Geography* **33** 849–858