

## – SPACES OF EXTRACTION, METROPOLITAN EXPLOSIONS: Planetary Urbanization and the Commodity Boom in Latin America

MARTÍN ARBOLEDA

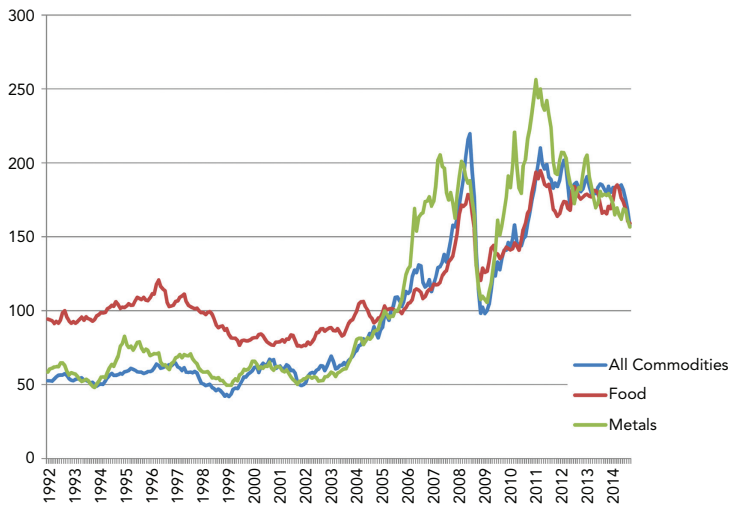
### Abstract

*Through an exploration of the political economy of the current commodity boom in Latin America, and on the basis of recent appropriations of Henri Lefebvre's notion of planetary urbanization, this article proposes viewing spaces of resource extraction resulting from an escalating international demand for raw materials as particular morphological expressions of market-driven processes of urbanization. Furthermore, the article draws on Lefebvre to argue that such burgeoning spaces of urbanization are the result of a contradictory tension between spatial homogenization—in the form of multiscalar governance frameworks and infrastructural programs—and territorial fragmentation—in the form of fixed capital allocations and state-led spatial segregation. When considered jointly, these contradictory movements allow us to grasp fully the extent of the problematic explosion of spaces that, according to Lefebvre, characterizes capitalist urbanization. The article concludes by reflecting on the emancipatory promise that underlies the planetary extension of the urban form because, with the projection of material infrastructures required for resource extraction—especially information technologies—across the rural realm, local communities have been able to shed their isolated state and emerge as fully fledged political actors.*

### Introduction

The recently published book *Implosions/Explosions: Towards a Study of Planetary Urbanization*, edited by Neil Brenner (2014), has as its cover an image of the desolate, colossal and gloomy tar sands of Alberta, Canada. These barren landscapes are the result of a historical turning point in the intensity and scale of resource extraction and have come to constitute the universal epitome for massive socio-ecological plundering that underlies fossil-fuel-powered, modern urban life. Such aesthetic—which became popularized by the work of photographers such as David Maisel, Garth Lenz and Edward Burtynsky—unambiguously conveys the philosophical and political urgency of transgressing the dominant epistemology of urban studies in which cities are considered the only morphological embodiment of urbanization. With his visionary 1970 work entitled *The Urban Revolution*, Henri Lefebvre began to lead in this direction because, for him, the population concentration that economic growth and industrialization demands was corroding the borders of a traditionally self-contained urban form, making urbanization a boundless phenomenon (Lefebvre, 2003 [1970]). This led him to describe capitalist globalization as a generalized 'explosion of spaces' that is fundamentally underpinned by contradictory yet interwoven processes of homogenization

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**FIGURE 1** International price index for raw materials, 1992–2014 (index: 2005 = 100) (source: author’s calculations, based on data from the International Monetary Fund’s (IMF) observatory of commodity markets)

and fragmentation of territories (Lefebvre, 1991 [1976]; 2003 [1970]; 2009b [1979]; 2009c [1980]; see also Brenner, 2000).

The relentless drive to excavate ever more deeply and exhaust ever more thoroughly indicates that the geographies of contemporary resource extraction are arguably one of the main driving forces of the explosion of (urban) spaces that Lefebvre so presciently described. Indeed, the fluctuations of international commodity markets in recent years attest to the frantic pace at which resource extraction is changing the face of the planet. Within only 10 years (from 1995 to 2005), worldwide production of aluminium increased by 64%, production of iron by 50% and production of copper by 42% (Klare, 2008; Toro, 2012), a growth that was linked to the growth in the construction, infrastructure and manufacturing sectors. This commodity boom, the International Monetary Fund (IMF, 2011: 46) notes, ‘has been remarkable in historical perspective not only for its magnitude, but also because—unlike most previous booms—it has been broad based’. This means that prices across all categories (food, minerals, hydrocarbons) have behaved similarly during the past decade, the voracious global demand for raw materials being the chief determinant of price variation (see World Bank, 2009; 2012; ECLAC, 2013b; see also Figure 1).

Since Latin-American countries possess some of the world’s largest mineral and oil reserves, as well as investment-friendly regulatory frameworks, the region has become the main destination for capital allocations in world mineral prospecting, accounting for almost one-third of total mining investment in 2010, at US \$180 billion (ECLAC, 2013b). The budget for exploration in the region has increased more than fivefold, from US \$566 million in 2003 to US \$3 billion per year in 2010 (*ibid.*), making several Latin-American countries recipients of substantial flows of foreign direct investment (FDI) (see Cancino, 2012). This has fuelled a massive wave of infrastructure, energy and mining undertakings across the whole regional territory in order to facilitate resource extraction at a massive scale. Because of the interplay of neoliberal governance frameworks, financial capital and technological developments such as sophisticated methods for land surveying, the mechanization of productive structures and the proliferation of open-cast mining, the speed and the scales of territorial transformation have expanded to an unprecedented extent.

In light of such considerations, and on the basis of the analytical distinction between *concentrated* and *extended* forms of urbanization proposed by Brenner and Schmid (2013; 2014; 2015; see also Brenner, 2014; Brenner and Katsikis, 2014), this article interrogates the political economy of the current commodity boom in order to recast geographies of extraction as particular morphological expressions of contemporary processes of capitalist urbanization. I then draw on Lefebvre to argue that such burgeoning urban morphologies are the result of a contradictory tension between spatial homogenization—in the form of multiscalar governance frameworks and infrastructural programs—and territorial fragmentation—in the form of fixed capital allocations and state-led spatial segregation. Finally, the article reflects on the emancipatory promise underlying the planetary extension of the urban form because, besides the obliterating effects of this contradictory movement, the processes of technological modernization concomitant to resource extraction have allowed local communities to shed their isolated state and emerge as fully fledged political actors. The article therefore aims at radically decentring the object of urban studies by recasting the sociospatial ramifications of the commodity boom as part and parcel of the contemporary global urban condition and, in so doing, at contributing to a growing debate on planetary urbanization (see Merrifield, 2012; Brenner, 2013; Brenner and Schmid, 2013; Merrifield, 2013; Brenner, 2014; Angelo and Wachsmuth, 2014; Brenner and Schmid, 2014; Merrifield, 2014a; 2014b; Brenner and Schmid, 2015).

The next section of the article provides a theoretical discussion of the Lefebvrian notion of generalized urbanization and of its recent appropriation by critical urban theorists. I argue that the process-oriented approach to the urban that is implicit in the Lefebvrian world-view, and especially the analytical distinction between extended and concentrated forms of urbanization, allows a recasting of the spatialities of resource extraction as immanent to the contemporary global urban condition. On that basis, the third section offers an analysis of the political economy of the boom in terms of the homogenization–fragmentation dialectic. The fourth section reflects on the political promise that underlies the relentless urban explosion produced by the escalating demand for raw materials, leading to some brief, final conclusions.

### **The implosions and explosions of capitalist urbanization**

Throughout his major works on space, written since the late 1960s (see Stanek, 2011), Lefebvre describes a simultaneously amplified and exploded urban reality as the irruption of industry and its pursuit of labour markets and raw materials implied an immeasurable extension of the city beyond city limits (Lefebvre, 2003 [1970]). For Lefebvre, the dissolution of the city as a distinct object was a result of the historical process of implosion–explosion (a metaphor he borrowed from nuclear physics) that could be described as:

The tremendous concentration (of people, activities, wealth, goods, objects, instruments, means, and thought) of urban reality and the immense explosion, the projection of numerous, distinct fragments (peripheries, suburbs, vacation homes, satellite towns) into space (*ibid.*: 14).

Paradoxically, it is the massive concentration in urban areas as a result of the capitalist mode of production that ultimately produces the outburst of the urban fabric through otherwise non-urban geographies. Through this process of explosion, space as a whole inserts itself into the modernized mode of production, being utilized to produce surplus value. For that reason, the urban fabric, with its multiple networks of communication and exchange becomes a part of capital (Lefebvre, 2009b [1979]). In this context, the spatial arrangement of a city, a region, a nation or even a continent increases productive forces in a similar way to that of the machinery and equipment in a factory

(*ibid.*: 188). What is most problematic about this, Lefebvre adds, is that space adopts a hierarchy that corresponds to that of social classes, assuming the form of a collection of ghettos (2009a [1978]). These ghettos are not simply juxtaposed, as they are ‘hierarchized in a way that represents spatially the economic and social hierarchy’ (*ibid.*: 244).

The process through which the uneven spatialities of the urban fabric are produced, is profoundly contradictory, as it falls within a schema that Lefebvre referred to as ‘homogeneity–fragmentation–hierarchization’ (2003 [1970]; 2009c [1980]; 2014 [1989]). First of all, there is a tendency towards homogenization in which capitalism produces a space that is a ‘reflection of the world of business on the national and international level’ (Lefebvre, 2009b [1979]: 187). According to Harvey (2006 [1982]), spatial integration—understood as the linking of commodity production in different places through exchange—is a precondition for the accumulation and circulation of capital. This homogenizing process is thus achieved by reducing physical barriers to the movement of commodities and capital (*ibid.*: 375). Concomitant to the homogenizing movement, there is also a tendency to fragmentation, as space is broken down into functionally specific, distinct spaces that would correspond to the spatial translation of the social division of labour (housing, leisure, transportation, production, and so forth) (see Lefebvre, 2009c [1980]). For Neil Smith (2008 [1984]), the necessity for accumulation leads to a continuous investment in fixed capital in the form of facilities such as railways, factories, warehouses, power stations, and so on. Since these facilities need to be geographically immobilized as a precondition for accumulation, there is a spatial (machineries and infrastructures) and social (labouring processes) concentration of capital, which would be the main determinant of the tendency to spatial fragmentation (*ibid.*).

Thus, at the heart of this contradictory movement lies the metaphor of implosion–explosion, which Lefebvre used in order to illustrate how at the same time as it projects itself across the planetary domain, the capitalist urbanization process is also constantly creating new, morphologically differentiated forms of urban centrality and peripheralization (Brenner, 2000). Recently, an emerging strand of critical urban thought has reclaimed this processual view of the urban to move beyond the entrenched epistemology of mainstream urban studies in which the urban is thought to be embodied only in cities, usually determined as such by population thresholds and densities (see Brenner, 2013; 2014; Brenner and Schmid, 2014). Transcending such epistemologies and ideological visions in studies of resource extraction is something of uttermost political and analytical urgency because, despite the fact that extraction sites may not have the densities and population thresholds of large urban areas, they nonetheless become the recipients of infrastructures, capital and migratory flows that transform them completely, superseding any clear distinction between city and country.

To breach the limitations of such a world-view, Brenner and Schmid (2013; 2014; 2015; see also Brenner, 2014; Brenner and Katsikis, 2014) have proposed considering the twenty-first century global urban condition in terms of *concentrated and extended* forms of urbanization. The former corresponds to densely settled zones (namely, cities, metropolitan regions, megacity regions, and so forth), whereas the latter would include infrastructures for energy, tourism, telecommunications and transportation, as well as extraction sites and landfills, among many other places that both result from and facilitate the dynamics of urban agglomeration (see Brenner and Katsikis, 2014). Thus, the logics of extended urbanization under neoliberalizing capitalism, Brenner and Katsikis (2014) suggest, imply the continued enactment and re-enactment of liminal places for resource extraction, agro-industrial production, energy and information circulation, waste management and diverse geopolitical strategies (*ibid.*: 433). Brenner (2014) refers to these liminal sites as ‘operational landscapes’ because, despite the fact that they may not be as densely populated as cities, they nonetheless play strategic roles in supporting the latter, their developmental rhythms being increasingly linked via worldwide spatial divisions of labour.

As the section that follows will explore in detail, the notion of extended urbanization constitutes a crucial analytical category for making sense of the massive sociospatial transformations that underlie the commodity boom in Latin America. The spatial transformations arising from these new cartographies of extraction, it should be noted, stretch beyond established zones of agglomeration such as Santiago, Lima and Buenos Aires, and sometimes even extend to places as remote as the peaks of the Andes, the Atacama Desert, the Amazon, Patagonia and even the Antarctica. In light of such considerations, it is important to view these transformations in the context of the conflictual and contradictory movement of homogenization–fragmentation that, based on Lefebvre, is what ultimately produces the explosion of spaces that underpins the extension of the urban form across such variegated geographies. The next section of the article develops an analysis of the political economy of the commodity boom not only in terms of its macrostructural impacts on domestic economies across the region, but also through a Lefebvrian examination of the legal and governance arrangements, as well as of the sociospatial ramifications it has produced on the ground.

### **The political geographies of the commodity boom**

According to the IMF (2011), the current commodity boom has been remarkable in historical perspective, not only because of its magnitude—as energy and metal prices have almost tripled since 2003—but because, unlike previous booms, it has included a wide array of raw materials (crude oil, metals, food). Also, the fact that most prices remained at record highs and showed rapid recovery after the 2008 subprime mortgage crisis and the 2011 European debt crisis attests to the persistence of this boom (World Bank, 2009; 2012; ECLAC, 2013b), which has been driven by accelerated growth in Asian economies as the core determinant of price variation. In fact, notwithstanding recent economic turbulence resulting from the aforementioned crises, the inertia of industrialization rates in China and India has led ECLAC (2013b) to conclude that the boom is likely to continue in the medium term. In its last quarterly report on commodity markets, the IMF (2014) has reported that although aggregate commodity prices plummeted during 2014 as a result of China's economic slowdown, some commodities—such as oil and specific metals—are beginning to show steady recovery.<sup>1</sup> The gold market, which plays a pivotal role in Latin America's mining activity, has flourished in recent years as a result of China's burgeoning middle class on the one hand (see de los Reyes, 2015) and of the government's expansive monetary policy on the other.<sup>2</sup>

The macroeconomic impacts of this phenomenon for Latin America have been massive. As of 2011, the region was the most popular destination for mineral prospecting, attracting 25% of global capital allocations, mainly in Mexico, Chile, Peru, Brazil, Colombia and Argentina (Deheza and Ribet, 2012; see also Bebbington *et al.*, 2008a; Gudynas, 2009a; Bebbington, 2012; Cancino, 2012). In general, between 2003 and 2014, the region witnessed massive inflows of foreign direct investment, reaching an all-time record high of US \$174,546 million in 2012 despite an overall slowdown in the global economy (ECLAC, 2012b), and this has profoundly affected productive structures, reinforcing an already rigid international division of labour. As a result, among all subregions of the continent, South America has become the most dependent on raw materials, with net commodity exports representing 10% of GDP, compared with 6% in 1970 (IMF, 2011). Although countries such as Argentina, Uruguay and Brazil have managed to diversify

1 Mining experts in Latin America have argued that lower commodity prices could actually trigger an intensification of extractive operations, because governments are likely to aim at extracting larger quantities of raw materials in order to cover fiscal deficits caused by low prices in the first place (Luna Acevedo, 2015).

2 According to *Russia Today*, gold prices will reach a new record during the next decade as a result of Asian demand. With the establishment of the Asian Infrastructure Investment Bank by the Chinese government—which is supposed to act as a geopolitical rival of the IMF—China's sovereign demand for gold has skyrocketed in order to provide a higher degree of reliability and confidence to its monetary basis (see <http://actualidad.rt.com/economia/169722-precios-oro-record-demanda-asia>, accessed 17 April 2015).



away from commodities, the latter still account for an average of 60% of total exports of goods and services (*ibid.*: 49).

According to official figures, mining and energy exports as a percentage of total exports have risen in most South American countries, for example, from 39.7% in 2001 to 62.4% in 2010 in Chile; from 46% in 2000 to 65% in 2010 in Colombia; and from 46% in 2000 to 61% in 2010 in Peru (Cancino, 2012: 66). This scale of accumulation requires a continuous investment of capital in creating a built environment for production (Smith, 2008 [1984]), and as noted previously, the region has also seen an increasing level of investment in material infrastructure oriented at reducing transaction costs associated with movement of goods through space (see ECLAC, 2011). According to the World Bank (2010), much of the investment on infrastructure in the region has been mobilized through private–public partnerships, with 845 infrastructure projects developed between 2000 and 2009 accounting for an overall US \$310,300 million in investment. Latin America thus accounted for 30% of investment on infrastructure in developing countries—telecommunications, energy and transport being the most successful sectors, attracting 47%, 31% and 20% of regional investment, respectively (World Bank, 2010).

In sum, the sociospatial translation of these figures is hard to assess, but what is certain is that these massive undertakings are rapidly transforming landscapes, territories and settlements into extended forms of urbanization all across the continent. A recent report by ECLAC (2012a) argued that the geographies of Latin America are currently undergoing significant changes, because areas with historically low population density are assuming an ‘increasingly urban profile’, mainly owing to ‘land-use change’ (*ibid.*: 25). ECLAC points to resource extraction as the main cause of these changes in land use, as many areas rich in biodiversity, endemic species and minerals have become operationalized into ‘hot spots’ for economic exploitation in the region (*ibid.*). As Bebbington (2012) has outlined, and to illustrate the magnitude of this phenomenon, between 2002 and 2009, the area granted to mining licenses in Colombia increased from 1.05 million ha to 4.77 million ha, and between 2004 and 2008, the area under hydrocarbon concessions in Peru increased from 14% to 72%. These are only a few figures that illustrate how the frontiers of resource extraction are dramatically being projected into brand new geographies, and these ‘hot spots’ (or operational landscapes), now part and parcel of an expanding urban fabric, are being linked ever more directly via infrastructures and built environments to global circuits of exchange.

The subsection that follows addresses the tendency to homogenization resulting from the boom, in terms of international mechanisms, legal reforms, policy and governance frameworks that have been enacted to facilitate resource extraction.

– The tendency to homogenization

As Smith (2008 [1984]; see also Harvey, 2006 [1982]) noted, the spatially integrated systems required for accumulation—especially if they are to be established at a continental scale—besides flows of capital, machineries and material infrastructures, require a tightly woven constellation of institutional apparatuses. In other words, as Lefebvre suggested, the homogenization of space is not only produced by relations of production; in so far as it is a political product, it also implies a network of strategies, and administrative and governance controls (Lefebvre, 2009c [1980]). In Latin America, this process is startlingly evident, because the commodity boom has also set in motion a process of institutional reconfiguration that has facilitated—and even accelerated—large-scale extractive operations.

Thus, since the late 1990s, a wave of institutional reforms at all scales has been taking place, unsettling all sorts of governance, policy, legal and even constitutional arrangements. To begin with, international financial institutions (IFIs) have been officially endorsing the shift to resource-intensive economies in Latin America ever since

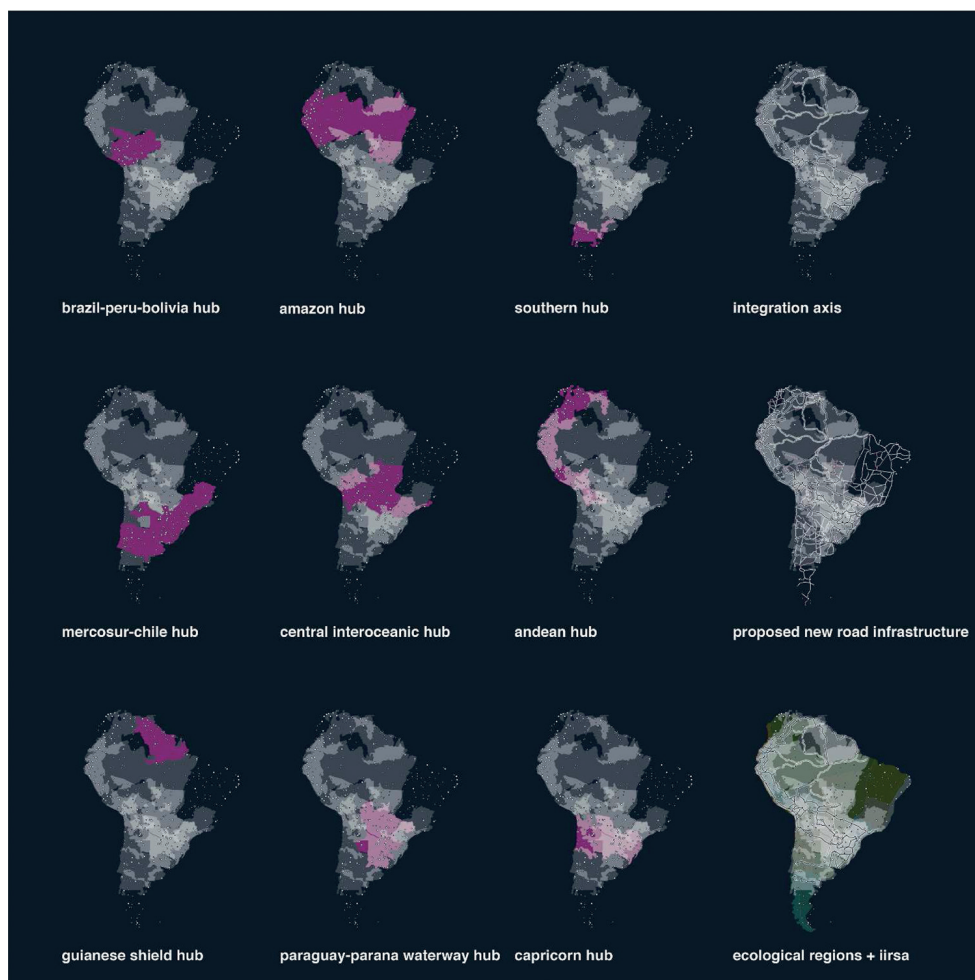
the structural adjustment reforms of the 1980s and 1990s. The World Bank group published a watershed document in 1996 titled *A Mining Strategy for Latin America and the Caribbean*, in which ‘friendly’ policy recommendations were made for implementing reforms to attract transnational mining investment.<sup>3</sup> In the years that followed the report, the World Bank maintained its support of programmes to reform mining codes, ease profit repatriation, reduce royalty rates and support geological surveying to create more incentives for companies to invest (Bebbington *et al.*, 2008b; Padilla, 2010; Infante, 2011; Rudas and Espitia, 2013). Besides the World Bank, other IFIs such as the Inter-American Development Bank, the Multilateral Investment Guarantee Agency and the International Financial Corporation have also been key supporters of this process (Bebbington *et al.*, 2008b). As a result, most mining codes in the region were reformed under the new outlook proposed at the international level, in order to try and liberalize domestic market conditions and attract investment for resource extraction, as was the case in Bolivia and Uruguay in 1991, Mexico in 1992, Cuba and Argentina in 1995, Brazil in 1996, Honduras in 1998, Venezuela in 1999, Nicaragua in 2000 and Colombia in 2001 (Fuentes, 2012; Toro, 2012; Pardo, 2013).

Although each regulatory framework has its own particularities, depending on the local context and legal tradition of the country, Fuentes (2012) has identified three core characteristics that cut across all mining codes. First, the state is the sole owner of natural resources, and property rights are neither imprescriptible nor subject to any statutory limitations whatsoever, despite the fact that the general tendency in the region is for states to delegate extraction activities to privately owned companies through concessions. Secondly, the underground is owned by the state, regardless of any property rights over the surface. Thirdly, mining has been invariably declared as a ‘public-interest activity’, which means that the state is entitled to expropriate privately owned territories (*ibid.*: 217).

These legal reforms have also coincided with a parallel tendency to negotiate and sign Free Trade Agreements (FTAs) that began shortly after the North American Free-Trade Agreement was ratified by Canada, Mexico and the United States in 1994, when the latter put in motion a negotiation campaign with Latin-American countries. Almost half of all 21 Latin-American countries have become signatories of FTAs—not only with the US but with several other countries—since the turn of the century, when negotiation strategies became more aggressive as a result of commodity prices. Many dispositions of this new generation of FTAs relating to investments have a direct impact on resource extraction, as transnational companies usually receive benefits that tend to boost their activities in substantial ways. These dispositions, for example, include obligations for host states to compensate companies whenever the latter consider their interests to be jeopardized by changes in policy or legal frameworks (CooperAcción, 2012; Toro, 2012).

This tendency towards homogenization has not been restricted to legal formulations and trade agreements only; it has also encompassed specific spatial manifestations via large-scale territorial planning and infrastructure programs. Since commodity exchange means reducing physical barriers to the movement of goods and money through space to a minimum (Harvey, 2006 [1982]; Smith, 2008 [1984]), achieving region-wide spatial integration across national borders has become a key priority. In contexts like these, Harvey (2006 [1982]: 397) noted, the effect is the creation of a hierarchy of means—market, institutional and state—for the production, modification and transformation of spatial configurations to the built environment. The Initiative for the Integration of the Regional Infrastructure of South America (IIRSA in Spanish), which was launched at a South American presidential summit in 2000, is among the most ambitious and Promethean endeavours to transform the subcontinent into a ‘spatially integrated system’ (see Smith, 2008 [1984] for an export-led regional economy;

3 From a newspaper article published in *El Tiempo* on 24 December 2013, by mining expert Guillermo Maya



**FIGURE 2** Integration and development hubs of the IIRSA (source: maps reproduced by permission of Víctor Muñoz Sanz/South America Project)

see also Zibechi, 2006; Martínez and Houghton, 2008; Razeto *et al.*, 2009). According to Zibechi (2006), the IIRSA is a multi-sectorial process aimed at developing and integrating transport, energy and telecoms infrastructures throughout the region, ordering geographical space in the form of terrestrial, fluvial and air transport networks; oil, gas and water pipelines; waterways, sea and inland ports, and power lines, among others. Funded by three multilateral banks (Razeto *et al.*, 2009), it encompasses over 500 infrastructure projects distributed along ten ‘integration and development’ axes, at an estimated cost of US \$75 billion.<sup>4</sup>

The scale and breadth of these undertakings are nothing short of astonishing (see Figure 2). To cite an example, the Paraná–Paraguay waterway is a megaproject that seeks to link the Orinoco, Amazon and La Plata riverbeds by interconnecting 17 rivers in order to facilitate fluvial transport between the La Plata River and the Caribbean (Zibechi, 2006). From the ten axes, four involve the Amazon and five are to connect the Pacific and Atlantic oceans in order to reduce transaction costs associated with the

4 The three banks are the Inter-American Development Bank, the Corporación Andina de Fomento (known in English as the Development Bank of Latin America), and the Fondo Financiero para el Desarrollo de la Cuenca de la Plata (FONPLATA).



circulation of raw materials destined for international markets (*ibid.*). According to Zibeche (*ibid.*), a view of nature either as a barrier to be overcome (the Andes mountain range), or as a source of wealth to be exploited, constitutes the logic that drives all aspects of the IIRSA (see also Martínez and Houghton, 2008). As a result of social resistance from local communities and civil-society organizations, the IIRSA has been evolving in secrecy, sometimes through complementary agreements or through infrastructure programs at the domestic level, and for this reason it is almost impossible to ascertain its true extent.<sup>5</sup> For instance, the binational mining agreement signed between Chile and Argentina in 1997, by which border areas located in the Andes mountain range were declared as strategic for mining activity—with special fiscal regimes and benefits for transnational companies—coincides to a large extent with the IIRSA's Southern Andean Hub (Razeto *et al.*, 2009; Infante, 2011).

Plan Puebla–Panamá (PPP), launched in 2001 at a projected cost of US \$20 billion, aimed at integrating transportation, energy and telecoms infrastructures from Mexico to Panama, was intended to be the Mesoamerican counterpart of the IIRSA. According to Wilson (2011), both projects are underpinned by the New Economic Geography (NEG), an offshoot of neoclassical economics that incorporates questions of geography and location so as to make sense of processes of uneven development. The NEG outlook—in terms of which space is conceptually reduced to transport costs—has been implemented by multilateral agencies in order to incorporate remote regions of the world to transnational circuits of capital via large-scale infrastructure projects such as IIRSA and PPP (*ibid.*). However, the PPP was officially terminated in 2008, after 7 years of struggle on the part of civil-society organizations, especially peasant communities and Zapatista groups in southern Mexico (Wilson, 2014). The PPP was replaced by the Mesoamerica Project for Integration and Development, a more modest infrastructural integration program (*ibid.*).

At the domestic level, the role of the state has been crucial for entrenching these homogenizing institutional frameworks, as the tendency to design export-led economic architectures dependent on the extraction of raw materials cuts across the majority of governments in the region, regardless of their political orientations. In fact, Gudynas (2009b; 2010) noted that the emergence of left-leaning governments (such as in Venezuela, Ecuador, Bolivia, Argentina and Nicaragua, among others) has paradoxically led to an intensification of resource extraction schemes. For Gudynas (2009b), these politically progressive regimes have implemented a 'neo-extractivist' model, in terms of which exports of raw materials retain their strategic importance within the economy, but go hand in hand with increased state regulatory activity, further taxation and royalties for transnational corporations, nationalizations and the introduction of policy frameworks aimed at the redistribution of revenues. Unfortunately, despite the good intentions implicit in the neo-extractivist approach, the negative effects on natural resources, ecosystems and local communities have persisted, if not been aggravated.

In sum, although the social geographies that have emerged from these institutional arrangements could be regarded as a reflection of the world of business at a regional scale and perhaps hint at the disruptive nature of the commodity boom, a focus on national and international scales alone would yield an incomplete picture of the unevenness of the operational landscapes of extended urbanization that ceaselessly proliferate throughout the region. It is precisely for this reason that Smith (2008 [1984]) believed that dependency theory, centre–periphery theory, world systems theory and the various approaches to uneven development fail to capture the full extent of the geographies of capitalism and, one might add, of the geographies of capitalist urbanization as well. Consequently, the section that follows constitutes a descent into the

5 Interview with Lucio Cuenca, Director of the Latin American Observatory for Environmental Conflicts (OLCA in Spanish), 23 December 2013

complex world of resource extraction on the ground, because it is only in conjunction with the local scale that one can visualize the way in which extractives tend to fragment, differentiate and operationalize further territories.

– The tendency to fragmentation

As previously argued, the tendency towards fragmentation is based on the social and spatial concentration of capital that, according to Smith (2008 [1984]) is a precondition for accumulation. Resource extraction (especially minerals) could be among the most spatially immobile economic activities: besides being eminently place-specific, it requires vast amounts of investment in fixed capital in the form of machinery and infrastructures. As Bebbington *et al.* (2009) have argued, the extractive industries are by definition a ‘point source activity’ (*ibid.*: 8; see also Bridge, 2009), in the sense that the geographic unevenness of geological formations results in the fact that some areas become territories of extraction while others do not. To the extent that extraction generates significant socio-environmental effects, geological unevenness invariably translates into territorial and social difference (Bebbington *et al.*, 2009).

Mining entails, as a first step, the removal of large quantities of soil using explosives in order to access the minerals that are buried underground. This has a profound effect on communities, ecosystems and water sources (Padilla, 2012). Also, large quantities of poisonous chemicals—most notably cyanide—are required for the process of lixiviation, which is central to mining and entails separating minerals from rocks (Padilla, 2012; Peña, 2013). Since these processes are developed at colossal scales, the material footprint of large-scale mining is gigantic—and so are its environmental externalities, as each mine requires between 460 and 1,060 litres of water per gram of mineral and produces between 50 and 140 million tons of solid waste per year. This is, on average, 40 times more than any Latin-American megacity during the same time period (Cabrera and Fierro, 2013; see also Ramírez and Ibagón, 2012). It should be noted that contemporary agribusiness works in similar ways as open-cast mining, both in terms of its material footprint and of its impact on local communities (see Gudynas, 2010).

Because of explosives, soil removal and chemicals, among other processes, once a given territory has been used for open-cast mining (or monoculture agribusiness), other economic activities such as agriculture, livestock or even real estate become unfeasible (Ramírez and Ibagón, 2012). It has been argued that concessions grossly exaggerate the effects of extraction on the landscape, because only a small proportion of areas granted for extraction is converted into actual mines or wells (Bebbington, 2012). Concession holders therefore exert absolute power over the territories handed over by the state, producing classic enclave economies that, according to Bridge (2009: 5), are simultaneously deeply integrated into the global economy and also fragmented from national space. Since concessions only give holders the right to the subsoil, rights to the surface have to be acquired through market transactions, negotiation or compulsory purchase (see Bebbington, 2012), thus making possible the most brutal processes of accumulation by dispossession (see Harvey, 2005), which entail that corporations constitute ‘virtual republics’ within territories of extraction. In so far as the concession is a legal scheme that cuts across most mining codes in the region (see Bebbington, 2012; Fuentes, 2012), the tendency towards spatial fragmentation and hierarchization is oriented, engineered and ultimately controlled by the state.

Furthermore, because of its manifold negative impacts, extraction projects elicit protest and revolt from communities and activists alike (Bebbington *et al.*, 2008b), making armed private security, militarization and violence the background of these emerging operational landscapes. Activists are typically subject to surveillance and intimidation, and in countries such as Colombia and Brazil they usually become victims of selective killings, sometimes at the hands of ‘death squads’ or paramilitary groups (see Karmy and Salinas, 2008; Bermúdez, 2012; Duque, 2012 and Colombia Solidarity

Campaign, 2013 for the relationship between extractivism and low-intensity warfare).<sup>6</sup> In a context of planetary urbanization, Merrifield (2014a: 41) contends, war no longer comprises grandiose campaigns by troops, but as the Latin-American case demonstrates, 'is rather a micro-everydayness of peacetime intervention, a dogged affair in which the police and the paramilitary play interchangeable roles'. Temporary migration flows are another factor that triggers violence and urban dereliction. Since investment projects usually require large numbers of temporary workers on an ongoing basis—either during construction or extraction periods, or both—the arrival of floating populations of industrial labourers to areas adjacent to extraction sites is usually accompanied by a dramatic increase in security problems, drug abuse and prostitution rates.<sup>7</sup>

In addition, since resource extraction requires large amounts of fixed capital allocations, the microeconomic effects of the irruption of vast capital flows in mining districts form a breeding ground for inequality and dispossession. These flows of circulating money tend to create microeconomic distortions resulting in artificial price increases across most goods and services—especially rents, which have been said to increase over 300% in some mining areas (see, for example, Colombia Solidarity Campaign, 2013: 92).<sup>8</sup> Overall, the processes of accumulation by dispossession (Harvey, 2005) that result from the extractive industries in Latin America are well documented (Bebbington *et al.*, 2008a; 2008b; Hinojosa, 2011; Hinojosa and Hennermann, 2011; Bebbington, 2012; Bermúdez, 2012; Duque, 2012; Idárraga, 2012; Padilla, 2012; Reyes and León, 2012; Soliz *et al.*, 2012; Cabrera and Fierro, 2013; Vargas, 2013; ECLAC 2013a); documentation includes accounts of proletarianization, displacement, violence, disruptions of public health, socio-ecological degradation, political corruption, militarization and systematic impoverishment of local communities, among other things.

These tendencies to fragment space, along with tendencies to homogenize it, are inextricably linked and constitute a differentiated unity, resulting in the continued production and reproduction of operational landscapes with ever-increasing intensity. The notion of extended urbanization is therefore central for grasping the complex logics of the contemporary urban form in the face of an increasingly voracious global demand for raw materials. As Merrifield has argued (2014b), planetary urbanization needs to be conceived as the progressive production of overgrowth as well as of undergrowth. In this sense, the precariousness of the operational landscapes that are being continuously produced across the region contrast starkly with the indicators of economic performance that characterize booming Latin-American metropolises such as Santiago de Chile, Rio de Janeiro and Panama City. However, this does not mean that the former are rural and the latter urban. In this sense, Merrifield (*ibid.*) warns about one-sided readings of sociospatial transformation; for him, the urban is not only 'bricks and mortar, high-rise buildings and autoroutes'—it is also a process that manifests itself as unpaved streets, back roads, by-waters and marginal zones that feel the wrath of the world market (*ibid.*: 389).

In Latin America, these processes of extended urbanization—or of undergrowth, to use Merrifield's terminology—have produced dramatic impacts over hundreds of places, communities and ecosystems, rendering a splintered pattern of landscapes of extraction with their rhizomes of highways, railways, pipelines, satellite towns, power lines and heavy machinery. Perhaps what is most paradoxical about this emerging

6 Interview with a member of Colombia Solidarity Campaign, 3 May 2013, and interview with a member of Amnesty International, 20 June 2013

7 Interviews with a member of SOS Huasco (4 December 2013), a member of Consejo de Defensa del Valle del Huasco (3 December 2013), a member of Freirina Conciente (5 December 2013) and an official from the Planning Secretariat of Vallenar, Chile (3 December 2013)

8 Interview with a member of Consejo de Defensa del Valle del Huasco (28 November 2013), an official from the Planning Secretariat of Vallenar, Chile (3 December 2013), and a 2013 report entitled 'La Colosa, una muerte anunciada' [La Colosa, a death foretold] by the Colombia Solidarity Campaign.

sociospatial condition—and this is precisely where the Lefebvrian approach has to supersede description and become a political statement—is that these operational landscapes for resource extraction have at the same time intensified the possibilities for encounter among previously isolated communities who have found in these new urban centralities a terrain for struggle. Therefore, the remainder of this article offers a reflection on the promise that lies within this urban explosion, especially concerning its implications for social and political mobilization.

### The extended urbanization of resistance

In a 1989 essay written for *Le Monde Diplomatique* and recently published in English, Lefebvre (2014 [1989]) reflected on the ways in which the worldwide expansion of the urban form could ultimately result in a new matrix of social relations. In his view, the homogenization–fragmentation dialectic he described in some of his previous works had become increasingly entrenched, and the quality of the environment had acquired an ‘urgent, politically central status’ (*ibid.*: 205). In such a context, which he saw as dictated by rising class antagonisms and the precariousness of our relationships with nature, associative life and grassroots democracy would need to be reinstated as a key priority (*ibid.*). Although he did not live to see the current commodity boom, Lefebvre’s prescient words reflect the current state of discontent, revolt and social mobilization that underpins the operationalization of territories and ecosystems in Latin America as a result of neoliberal reforms and rising commodity prices after the turn of the century. According to the Environmental Justice Atlas, nearly one-third of all socio-environmental conflicts in the world are taking place in Latin America—414 of 1,259 registered cases.<sup>9</sup>

In so far as urbanization implies a multiscalar process of production and reproduction of the built environment in which global structures of capital and everyday practices become interlinked (see Wachsmuth, 2014), these operational landscapes of resource extraction—besides fostering marginalization and dispossession—also provide new centralities and opportunities for encounter between previously isolated communities or individuals. Therefore, as several studies have also concluded (see Bebbington *et al.*, 2008a; Svampa and Antonelli, 2009; de la Cadena, 2010; Gudynas, 2010; Bebbington, 2012; CINEP, 2012; Padilla, 2012; ECLAC, 2013a), there is a close relationship between extractivism and social mobilization in Latin America, with increasing numbers of communities and social movements opposing mining, agribusiness, logging, energy and oil extraction projects. New forms of solidarity between local communities and international advocacy networks have emerged, linking operational landscapes and large urban agglomerations in mutually transformative ways. Organizations such as Mining Watch Canada and London Mining Network in the global North, as well as the Latin American Observatory for Environmental Conflicts (OLCA in Spanish) and the Observatory for Mining Conflicts in Latin America (OCMAL in Spanish) in the global South, have developed strong and densely interwoven networks of cooperation and political solidarity with hundreds of communities opposing investment projects on the ground.

Thus, it is precisely in the opening of avenues for increased communication and interaction where the emancipatory promise of planetary urbanization lies. Along with energy transmission lines and roads, contemporary techniques for resource extraction require sophisticated telecommunication infrastructures, meaning that extended urbanization following the commodity boom has not only fostered physical mobility (via road infrastructures) but also communication among local communities, in themselves

<sup>9</sup> See <http://www.ejatlus.org> (accessed 27 November 2014); see also the website of the Observatory for Mining Conflicts in Latin America (OCMAL in Spanish), at [www.conflictosmineros.net](http://www.conflictosmineros.net) (accessed 7 July 2014).

a crucial precondition for political action.<sup>10</sup> Lefebvre, in his 1989 essay, points in this direction, noting how the appearance of communication technologies and knowledge becoming worldwide would pave the way for what he viewed as a new concept of citizenship (Lefebvre, 2014 [1989]). Indeed, Michael Hardt and Antonio Negri (2004) have developed a similar argument, noting how communication is key to the political significance of the traditional division between city and country. For them, isolation and incommunicability—not ignorance and parochialism—are what defines rural life. To the extent that the peasantry becomes communicative and active, Hardt and Negri suggest, it ceases to exist as a separate political category, hence eroding the distinction between town and country (*ibid.*).

It is precisely for this reason that Lefebvre considered that under the ‘planetarization’ of the urban, technologies of information and data processing would dictate new paradigms of encounter and association (see Schmid, 2014). During my fieldwork in several mining towns and villages in Colombia and Chile, I was able to interview and have informal conversations with dozens of activists and community leaders. What struck me most was their proficiency with blogs, social media and several other internet tools. Throughout our conversations, most of them pointed out how the arrival of transnational corporations to their territories invariably goes hand in hand with the arrival of internet connectivity, and radio and mobile phone signals required for extractive and logistical activities. Accordingly, they have been able to draw an immense political impulse from the revolutionary changes introduced by the extractive industries. The fact that 50% of Peru’s social conflicts are currently related to the extractive industries (Bebbington, 2012: 1157) and that the number of struggles against oil, coal and gold megaprojects has increased almost eightfold in Colombia during the period from 2001 to 2011 (CINEP, 2012: 10) attests to the emergence of these new political subjects.

In a well-known passage from *The Communist Manifesto* (2002 [1848]), Marx and Engels highlight how, with the advance of industry, the bourgeoisie inadvertently replaces the isolation of workers with their union through association and, in so doing, lays the foundations for the revolutionary movement of the proletariat. In Volume 1 of *Capital* (1976 [1867]), Marx also stresses how it is precisely in agriculture—and in the countryside in general—where industry exerts the most revolutionary effects, because it transforms the peasant into a wage labourer and thus creates the material conditions for a ‘new and higher synthesis’ (*ibid.*: 637). With the proliferation of extended forms of urbanization—and the attendant neo-industrial means of production—the case of Latin America allows us to view how local communities have shed their isolated state and emerged as fully fledged political actors. A 2008 constitutional reform in Ecuador, according to which the *Pachamama* (‘Mother Earth’) was granted rights in order to curb extractive projects,<sup>11</sup> as well as the suspension of multi-million-dollar undertakings such as the Hidroaysén dams in the Chilean part of Patagonia, the Pascua Lama mine in the Chilean Andes and the Plan Puebla–Panamá, following multiscale political mobilization,<sup>12</sup> are but a few examples of the stirrings of the renewed citizen (*citoyen*) envisaged by Lefebvre in his 1989 essay. For him, the renewed city dweller would thrive in the mobility that is nurtured by technological innovation, and the social relations she established would tend to stretch beyond villages, cities, countries and even continents.

10 According to the World Bank (2010), and in terms of investments on infrastructure, telecom was the most successful sector, attracting 47% of regional investment (US \$146 billion). Energy was in second place at 31% of regional investment (US \$94.7 billion), and transport ranked third, at 20% of regional investment (US \$60 billion).

11 The *Pachamama* is an Andean indigenous deity that represents Mother Earth. The reform was the result of a joint effort by local indigenous communities, environmentalists and left-wing members of parliament. Ecuador’s president Rafael Correa—one of the main proponents of ‘neo-extractivism’ (Gudynas, 2009b)—was clearly upset when the reform was passed by parliament.

12 For a Lefebvrian account of social resistance against the Plan Puebla–Panama, see Wilson (2014).



## Conclusions

This article has revisited Henri Lefebvre's notion of planetary urbanization as well as some of its recent appropriations by critical urban theorists in order to make sense of the exploding urban morphologies that are rapidly changing the face of Latin America as a result of a voracious international demand for raw materials. In so doing, I have argued that Brenner and Schmid's (2013; 2014) analytical distinction between extended and concentrated forms of urbanization allows recasting extraction sites—regardless of their densities and population thresholds—as particular morphological expressions of the contemporary urban condition. Based on this, the main argument of this article has been to show how the emerging layers of extended urbanization concomitant to the commodity boom are ultimately driven by the dialectical movement between two contradictory yet complementary tendencies: first, a tendency to homogenization, consisting of a wide range of material and institutional arrangements aimed at producing a frictionless, homogeneous space for the movement of raw materials across borders; and secondly, a fragmentation tendency that results not only from the social and spatial concentration of capital that is a precondition for accumulation, but also from the geological unevenness intrinsic to mineral deposits, which invariably translates into territorial and social difference. In Lefebvre's view, these conflicting tendencies ultimately yield a 'disintegrating national space at the heart of a consolidating worldwide space' (Lefebvre, 2009a [1978]: 255).

Yet, despite the obliterating effects of this contradictory movement, the explosion of urban fragments across rural places has nonetheless rendered a fertile ground for the production of new political subjectivities. For this reason, the last section pondered the revolutionary potential that is intrinsic to planetary urbanization. In so far as contemporary techniques for resource extraction require sophisticated infrastructures for telecommunications, local communities have been able to capitalize on such technological innovations and become communicative and mobile. In shedding their isolated state, local actors have been able not only to insert themselves but to give momentum to multiscale advocacy networks and thus have achieved manifold political victories against states and transnational corporations. New forms of centrality based on information are transforming external (territory) and internal (consciousness) natures in equal measure, so the challenge for future research in resource extraction urbanism is to interrogate the type of subjects that are being produced by these revolutionary changes in the mode of production. For that reason, the last section of the article intended to point to these emerging operational landscapes as sites where the analyst can find traces of the *citoyen* hinted at by Lefebvre. The right to the city under planetary urbanization, he argued in that late and enigmatic 1989 essay, 'implies nothing less than a revolutionary concept of citizenship' (Lefebvre, 2014 [1989]: 205).

**Martín Arboleda**, Urban Theory Lab, Harvard University, Gund Hall, 48 Quincy Street, Cambridge, MA 02138, USA, marboleda@gsd.harvard.edu

## References

- Angelo, H. and D. Wachsmuth (2014) Urbanizing urban political ecology: a critique of methodological cityism. *International Journal of Urban and Regional Research* 39.1, 16–27.
- Bebbington, A. (2012) Underground political ecologies. *Geoforum* 43.6, 1152–62.
- Bebbington, A., D. Bebbington, J. Bury, J. Langan, J. Muñoz and M. Scurrah (2008a) Mining and social movements: struggles over livelihood and rural territorial development in the Andes. *World Development* 36.12, 2888–905.
- Bebbington, A., L. Hinojosa, D. Bebbington, M.L. Burneo and X. Wanaars (2008b) Contention and ambiguity: mining and the possibilities of development. *Development and Change* 39.6, 887–914.
- Bebbington, A., D. Bebbington and L. Hinojosa (2009) Extraction, inequalities and territories in Bolivia. Paper presented at the 2009 Congress of the Latin American Studies Association, Rio de Janeiro, Brazil, 11–14 June.
- Bermúdez, R.E. (2012) Impactos de los grandes proyectos mineros en Colombia sobre la vida de las mujeres [Effects of large-scale mining projects on the lives of women]. In C. Toro, J. Fierro, S. Coronado and T. Roa (eds.), *Minería, territorio y conflicto en Colombia* [Mining, territory and conflict in Colombia], Universidad Nacional de Colombia, Bogotá.
- Brenner, N. (2000) The urban question as a scale question: reflections on Henri Lefebvre, urban theory and the politics of scale. *International Journal of Urban and Regional Research* 24.2, 361–78.

- Brenner, N. (2013) Theses on urbanization. *Public Culture* 25.1, 85-114.
- Brenner, N. (2014) Introduction: urban theory without an outside. In N. Brenner (ed.), *Implosions/explosions: towards a study of planetary urbanization*, Jovis, Berlin.
- Brenner, N. and N. Katsikis (2014) Is the Mediterranean urban? In N. Brenner (ed.), *Implosions/explosions: towards a study of planetary urbanization*, Jovis, Berlin.
- Brenner, N. and C. Schmid (2013) The urban age in question. *International Journal of Urban and Regional Research* 38.3, 731-55.
- Brenner, N. and C. Schmid (2014) Planetary urbanization. In N. Brenner (ed.), *Implosions/explosions: towards a study of planetary urbanization*, Jovis, Berlin.
- Brenner, N. and C. Schmid (2015) Towards a new epistemology of the urban? *CITY* 19.2-3, 151-82.
- Bridge, G. (2009) The hole world: spaces and scales of extraction. *New Geographies* 2, 43-48.
- Cabrera, M. and J. Fierro (2013) Implicaciones ambientales y sociales del modelo extractivista en Colombia [Environmental and social implications of the extractivist model in Colombia]. In L.J. Garay (ed.), *Minería en Colombia: fundamentos para superar el modelo extractivista* [Mining in Colombia: elements to overcome the extractivist model], Contraloría General de la República de Colombia, Bogotá.
- Cancino, A. (2012) La dudosa fortuna minera de Suramérica: los países andinos Colombia, Chile y Perú [The dubious fortune of mining in South America: the Andean countries of Colombia, Chile and Peru]. In C. Toro, J. Fierro, S. Coronado and T. Roa (eds.), *Minería, territorio y conflicto en Colombia* [Mining, territory and conflict in Colombia], Universidad Nacional de Colombia, Bogotá.
- CINEP (Centro de Investigación y Educación Popular) (2012) *Minería, conflictos sociales y violación de derechos humanos en Colombia* [Minerals, social conflict and human-rights violations in Colombia]. Centro de Investigación y Educación Popular, Bogotá.
- Colombia Solidarity Campaign (2013) *La Colosa, a death foretold: alternative report about the AngloGold Ashanti gold mining project in Cajamarca*, Tolima, Colombia. London.
- CooperAcción (2012) Los TLC, las inversiones y la expansión minera en América Latina. [Free-trade agreements, investments and mining in Latin America]. CooperAcción, Lima.
- de la Cadena, M. (2010) Indigenous cosmopolitics in the Andes: conceptual reflections beyond 'politics'. *Cultural Anthropology* 25.2, 334-70.
- Deheza, E. and U. Ribet (2012) Latin America's mining boom: the socio-environmental and security dynamics in the case of Colombia. *Rusi Journal* 157.5, 22-31.
- de los Reyes, J. (2015) Another take on gold mining [WWW document]. URL <http://entitleblog.org/2015/04/06/another-take-on-gold-mining/> (accessed 17 April 2015).
- Duque, M. (2012) Minería: yacimientos explosivos. Las bonanzas y el conflicto, la historia se repite [Mining: explosive deposits. Booms and conflict: the story repeats itself]. In C. Toro, J. Fierro, S. Coronado and T. Roa (eds.), *Minería, territorio y conflicto en Colombia* [Mining, territory and conflict in Colombia], Universidad Nacional de Colombia, Bogotá.
- ECLAC (Economic Commission for Latin America and the Caribbean) (United Nations) (2011) *Infraestructura: experiência na América Latina* [Infrastructure: the case of Latin America]. ECLAC, Santiago de Chile.
- ECLAC (Economic Commission for Latin America and the Caribbean) (United Nations) (2012a) *La inversión extranjera directa en América Latina y el Caribe*. [Foreign direct investment in Latin America and the Caribbean]. ECLAC, Santiago de Chile.
- ECLAC (Economic Commission for Latin America and the Caribbean) (United Nations) (2012b) *Population, territory and sustainable development*. ECLAC, Santiago de Chile.
- ECLAC (Economic Commission for Latin America and the Caribbean) (United Nations) (2013a) *Natural resources within the Union of South American Nations: status and trends for a regional development agenda*. ECLAC, Santiago de Chile.
- ECLAC (Economic Commission for Latin America and the Caribbean) (United Nations) (2013b) *Desarrollo minero y conflictos socioambientales: los casos de Colombia, México y Perú* [Mining and socio-environmental conflicts: the case of Colombia, Mexico and Peru]. ECLAC, Santiago de Chile.
- Fuentes, A. (2012) Legislación minera en Colombia y derechos sobre las tierras y territorios [Mining legislation in Colombia and rights to land and territories]. In C. Toro, J. Fierro, S. Coronado and T. Roa (eds.), *Minería, territorio y conflicto en Colombia* [Mining, territory and conflict in Colombia], Universidad Nacional de Colombia, Bogotá.
- Gudynas, E. (2009a) La ecología política de la crisis global y los límites del capitalismo benévolo [The political ecology of the global crisis and the limits of benign capitalism]. *Iconos, Revista de Ciencias Sociales* 36, 53-67.
- Gudynas, E. (2009b) Diez tesis urgentes sobre el nuevo extractivismo [Ten urgent theses on new extractivism]. In Centro Latinoamericano de Ecología Social (ed.), *Extractivismo, política y sociedad* [Extractivism, politics and society], Quito.
- Gudynas, E. (2010) Agropecuaria y nuevo extractivismo bajo los gobiernos progresistas de América del Sur [Agriculture and new extractivism under the progressive governments of South America]. *Territorios* 5, 37-54.
- Hardt, M. and A. Negri (2004) *Multitude: war and democracy in the age of empire*. The Penguin Press, New York, NY.
- Harvey, D. (2005) *The new imperialism*. Oxford University Press, New York, NY.
- Harvey, D. (2006 [1982]) *The limits to capital*. Verso, London and New York, NY.
- Hinojosa, L. (2011) Riqueza mineral y pobreza en los Andes [Mineral wealth and poverty in the Andean environments]. *European Journal of Development Research* 23.3, 488-504.
- Hinojosa, L. and K. Hennermann (2011) La dimensión ambiental de las dinámicas territoriales rurales en contextos de expansión de las industrias extractivas. [Environmental dimensions of rural territorial dynamics in the context of the expansion of resource extraction]. Working Paper No. 64, Programa Dinámicas Territoriales Rurales, Centro Latinoamericano para el Desarrollo Rural, Santiago de Chile.
- Idárraga, A. (2012) El devenir de la minería transnacional en Colombia: incertidumbres en torno a la relación ambiente, trabajo y salud [Prospects of transnational mining in Colombia: uncertainties surrounding the relationship between environment, work and health]. In C. Toro, J. Fierro, S. Coronado and T. Roa (eds.), *Minería, territorio y conflicto en Colombia* [Mining, territory and conflict in Colombia], Universidad Nacional de Colombia, Bogotá.
- Infante, C. (2011) *Pasivos ambientales mineros: barriendo bajo la alfombra* [Environmental liabilities of mining: swept under the carpet]. Observatorio Latinoamericano de Conflictos Ambientales, Santiago de Chile.
- IMF (International Monetary Fund) (2011) *Regional economic outlook: Western hemisphere*. IMF, Washington, DC.
- IMF (International Monetary Fund) (2014) *Quarterly review of commodity markets, September 2014*. IMF, Washington, DC.
- Karmy, J. and B. Salinas (2008) *Pascua Lama: conflicto armado a nuestras espaldas* [Pascua Lama: armed conflict behind our backs]. Editorial Quimantú, Santiago de Chile.
- Klare, M. (2008) *Planeta sediento, recursos menguantes: la nueva geopolítica de la energía*. [Rising powers, shrinking planet: the new geopolitics

- of energy]. Ediciones Urano, Santiago de Chile.
- Lefebvre, H. (1991 [1976]) *The production of space*. Wiley-Blackwell, Cambridge.
- Lefebvre, H. (2003 [1970]) *The urban revolution*. University of Minnesota Press, Minneapolis, MN.
- Lefebvre, H. (2009a [1978]) Space and the state. In N. Brenner and S. Elden (eds.), *Henri Lefebvre: state, space, world*, University of Minnesota Press, Minneapolis, MN.
- Lefebvre, H. (2009b [1979]) Space: social product and use value. In N. Brenner and S. Elden (eds.), *Henri Lefebvre: state, space, world*, University of Minnesota Press, Minneapolis, MN.
- Lefebvre, H. (2009c [1980]) Space and mode of production. In N. Brenner and S. Elden (eds.), *Henri Lefebvre: state, space, world*, University of Minnesota Press, Minneapolis, MN.
- Lefebvre, H. (2014 [1989]) Dissolving city, planetary metamorphosis. *Environment and Planning D: Society and Space* 32.2, 203–05.
- Luna Acevedo, I. (2015) Se cae el auge de la bonanza y se agrava el extractivismo [Extractivism intensifies as boom ends], 20 April, *El Día* [WWW document]. URL [http://www.eldia.com.bo/index.php?c=Portada&articulo=Se-cae-el-auge-de-la-bonanza-y-se-agrava-el-extractivismo&cat=1&pla=3&id\\_articulo=169940](http://www.eldia.com.bo/index.php?c=Portada&articulo=Se-cae-el-auge-de-la-bonanza-y-se-agrava-el-extractivismo&cat=1&pla=3&id_articulo=169940) (accessed 20 April 2015).
- Martínez, G. and J. Houghton (2008) La IIRSA: o el mega-ordenamiento de los territorios indígenas [The IIRSA: or the mega-ordering of indigenous territories]. In J. Houghton (ed.), *La tierra contra la muerte: conflictos territoriales de los pueblos indígenas en Colombia* [The land against death: territorial conflicts of indigenous peoples in Colombia], Ediciones Anthropos, Bogotá.
- Marx, K. (1976 [1867]) *Capital: a critique of political economy*. Volume 1, Penguin Books, New York, NY.
- Marx, K. and F. Engels (2002 [1848]) *The communist manifesto*. Penguin Books, New York, NY.
- Merrifield, A. (2012) The politics of the encounter and the urbanization of the world. *City* 16.3, 269–83.
- Merrifield, A. (2013) The urban question under planetary urbanization. *International Journal of Urban and Regional Research* 37.3, 909–22.
- Merrifield, A. (2014a) *The new urban question*. Pluto Press, London.
- Merrifield, A. (2014b) Whither urban studies? In N. Brenner (ed.), *Implosions/explosions: towards a study of planetary urbanization*, Jovis, Berlin.
- Padilla, C. (2010) Minería: ¿Desarrollo o amenaza para las comunidades en América Latina? [Mining: development of or threat to communities in Latin America?] Observatorio de Conflictos Mineros de América Latina.
- Padilla, C. (2012) Minería y conflictos sociales en América Latina [Mining and social conflicts in Latin America]. In C. Toro, J. Fierro, S. Coronado and T. Roa (eds.), *Minería, territorio y conflicto en Colombia* [Mining, territory and conflict in Colombia], Universidad Nacional de Colombia, Bogotá.
- Pardo, L.A. (2013) Propuestas para recuperar la gobernanza del sector minero colombiano [Proposals for reclaiming the governance of mining in Colombia]. In L.J. Garay (ed.), *Minería en Colombia: fundamentos para superar el modelo extractivista* [Mining in Colombia: elements to overcome the extractivist model], Contraloría General de la República de Colombia, Bogotá.
- Peña, G. (2013) Manifiesto del agua [A water manifesto]. Comité Para la Defensa del Agua y el Páramo de Santurbán, Bucaramanga.
- Ramírez, D. and N. Ibáñez (2012) Exportando minerales para importar alimentos [Exporting minerals to import food]. In C. Toro, J. Fierro, S. Coronado and T. Roa (eds.), *Minería, territorio y conflicto en Colombia*. [Mining, territory and conflict in Colombia], Universidad Nacional de Colombia, Bogotá.
- Razeto, C., D. Soto and A. Marconi (2009) Pascua Lama, IIRSA: acumulación por desposesión: el imperio contraataca [Pascua Lama, IIRSA: accumulation by dispossession: the empire strikes back]. Paper presented at the Second Conference of Undergraduate Students in Humanities and Social Sciences, Faculty of Social Sciences, University of Chile (available at [www.facsoc.uchile.cl/noticias/2009/doc/Felaa1.pdf](http://www.facsoc.uchile.cl/noticias/2009/doc/Felaa1.pdf)).
- Reyes, P. and I. León (2012) Las nuevas guerras justas y la política (neo) extractivista global: nuevos escenarios de biopoder [The new just wars and (neo)extractivist global policy: new scenarios of biopower]. In C. Toro, J. Fierro, S. Coronado and T. Roa (eds.), *Minería, territorio y conflicto en Colombia* [Mining, territory and conflict in Colombia], Universidad Nacional de Colombia, Bogotá.
- Rudas, G. and J.E. Espitia (2013) Participación del estado y la sociedad en la renta minera [The role of the state and society in mining revenues]. In L.J. Garay (ed.), *Minería en Colombia: fundamentos para superar el modelo extractivista*. [Mining in Colombia: elements to overcome the extractivist model], Contraloría General de la República de Colombia, Bogotá.
- Schmid, C. (2014) Networks, borders, differences: towards a theory of the urban. In N. Brenner (ed.), *Implosions/explosions: towards a study of planetary urbanization*, Jovis, Berlin.
- Smith, N. (2008 [1984]) *Uneven development: nature, capital and the production of space*. University of Georgia Press, Athens, GA.
- Soliz, F., A. Maldonado and C. Valladares (2012) Las actividades extractivas minan los derechos de los niños y las niñas en las fronteras [Extractive activities undermine the rights of children in border territories]. In C. Toro, J. Fierro, S. Coronado and T. Roa (eds.), *Minería, territorio y conflicto en Colombia* [Mining, territory and conflict in Colombia], Universidad Nacional de Colombia, Bogotá.
- Staneck, L. (2011) *Henri Lefebvre on space: architecture, urban research and the production of theory*. University of Minnesota Press, Minneapolis, MN.
- Svampa, M. and M. Antonelli (eds.) (2009) *Minería transnacional, narrativas del desarrollo y resistencias sociales* [Transnational mining, narratives of development and social resistance]. Editorial Biblos, Buenos Aires.
- Toro, C. (2012) Geopolítica energética: minería, territorio y resistencias sociales [Energy geopolitics: mining, territory and social resistance]. In C. Toro, J. Fierro, S. Coronado and T. Roa (eds.), *Minería, territorio y conflicto en Colombia* [Mining, territory and conflict in Colombia], Universidad Nacional de Colombia, Bogotá.
- Vargas, F. (2013) Minería, conflicto armado y despojo de tierras: impactos, desafíos y posibles soluciones jurídicas [Mining, armed conflict and land-grabbing: effects, challenges and possible legal solutions]. In L.J. Garay (ed.), *Minería en Colombia: fundamentos para superar el modelo extractivista* [Mining in Colombia: elements to overcome the extractivist model], Contraloría General de la República de Colombia, Bogotá.
- Wachsmuth, D. (2014) City as ideology. In N. Brenner (ed.), *Implosions/explosions: towards a study of planetary urbanization*, Jovis, Berlin.
- Wilson, J. (2011) Colonising space: the new economic geography in theory and practice. *New Political Economy* 16.3, 373–97.
- Wilson, J. (2014) The violence of abstract space: contested regional developments in southern Mexico. *International Journal of Urban and Regional Research* 38.2, 516–38.
- World Bank (1996) A mining strategy for Latin America and the Caribbean. Technical Paper No. 345, Washington, DC.

World Bank (2009) Global economic prospects: commodities at the crossroads. Washington, DC.

World Bank (2010) Private participation in infrastructure in Latin America and the Caribbean in the last decade. Private Participation in Infrastructure Database, Washington, DC.

World Bank (2012) Global economic prospects: managing growth in a volatile world. Washington, DC.

Zibechi, R. (2006) IIRSA: la integración a la medida de los mercados [Integration tailored to the markets]. *IRCAmerica* 33.14, 19-26.