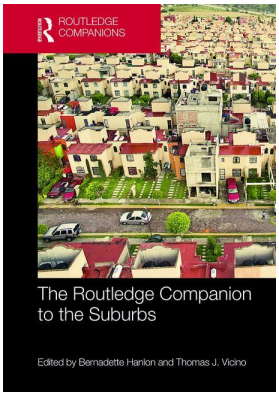
This article was downloaded by: *10.3.97.143*
On: 11 Dec 2023
Access details: *subscription number*
Publisher: *Routledge*
Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: 5 Howick Place, London SW1P 1WG, UK



The Routledge Companion to the Suburbs

Bernadette Hanlon, Thomas J. Vicino

Suburbanization in Latin America

Publication details
https://www.routledgehandbooks.com/doi/10.4324/9781315266442-6
Lawrence A. Herzog
Published online on: 30 Aug 2018

How to cite :- Lawrence A. Herzog. 30 Aug 2018, *Suburbanization in Latin America from:* The Routledge Companion to the Suburbs Routledge
Accessed on: 11 Dec 2023
https://www.routledgehandbooks.com/doi/10.4324/9781315266442-6

PLEASE SCROLL DOWN FOR DOCUMENT

Full terms and conditions of use: https://www.routledgehandbooks.com/legal-notices/terms

This Document PDF may be used for research, teaching and private study purposes. Any substantial or systematic reproductions, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The publisher shall not be liable for an loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

Downloaded By: 10.3.97.143 At: 23:11 11 Dec 2023; For: 9781315266442, chapter5, 10.4324/9781315266442-6

5

Suburbanization in Latin America

Lawrence A. Herzog

Introduction

The suburbanization of Latin America, over the last three decades, can be viewed as a subset of a larger phenomenon – what one might call the *globalization* of urban sprawl. Since the end of the last century, there has been a global diffusion of the American suburban model, or the idea of an American-type suburb (rather than its literal physical form) across the border to the Americas' other nations. As this wave of suburban-style development spreads across the distant outskirts of city-regions it reproduces ecological problems that have come to define U.S. suburbs. As such, these "global suburbs" (American-style suburbs adapted globally into other urban cultures and contexts) are as unsustainable as their northern counterparts (Herzog, 2015). In fact, given the economic and social development challenges facing Mexico, Central, and South America, the long-term implications of these new suburbs are worrisome.

For the purpose of this chapter, I will argue that "suburb," as a category of urban development in the Americas, should be defined in the context of the original post-war American urban design prototype – single-family, detached homes laid out on low-density subdivisions, typically with curvilinear street patterns, surrounded by separate shopping centers, schools, offices, and other amenities generally only reachable by car. This design model evolved in the United States in the 1950s and 1960s. The suburb was typically located in a peripheral district, away from the downtown and deliberately divided into separate land use zones – residential, shopping, office – all designed principally around automobile travel (Duany et al., 2000).

Further, I consider "suburb" as an urban planning "narrative" that embodies a set of cultural values, notably – privacy, exclusivity, and security. American suburbs, above all else, place a large emphasis on privacy and the notion of safety – and protection from the perceived "ills" of the inner-city (Kunstler, 1993). Though the architectures of the emerging elite and middle-class "global suburbs" south of the border may take on different densities and visual forms, the fact is, this idea of building fortress enclaves somehow buffered from the existing city has taken root from Mexico to South America. America's "suburbia" model has spread south.

The building of suburbs can be seen as one plank in the larger project of American modernity. Marshall Berman defined modernism as "any attempt by modern men and women to become subjects as well as objects of modernization to get a grip on the modern world and make

Downloaded By: 10.3.97.143 At: 23:11 11 Dec 2023; For: 9781315266442, chapter5, 10.4324/9781315266442-6

themselves at home in it" (Berman, 1988, p. 5). Thus, one must remember that as American cities grew after World War II, and as freeways and suburban communities were being laid out, the world was watching. In Brazil, architects Lucio Costa and Oscar Neimeyer were so enamored of the modernist project they designed an entire city, the new national capital of Brasília, using the principles of modern urban design. That city, constructed in only three years, quickly revealed the dangers of designing with a limited palette of modernist ideals. In Berman's words, Brasília quickly became "immense empty spaces in which the individual feels lost, as alone as a man on the moon" (ibid., p. 7).

The critical point here is that America's suburb was part of what one scholar has termed a "global project" (Beauregard, 2006). Following World War II, the United States became the center of a global economy based on free trade. However, that global dominance was not only economic, it was also cultural. The U.S. government emphasized a program of spread-out cities, in part because the federal government saw the marketing value of projecting the image of a prosperous, modern America, where families live in safe suburbs. This became the idealized American habitat model, to which nations all over the world might aspire. In this sense, the suburb became a place that exemplified American freedom, security, and the promise of prosperity. It has also been argued that homeownership, being created in the new suburbs, would be another way to protect the values of capitalism against the tide of socialism. Suburban developer Levitt, who built the iconic Levittowns on the east coast was quoted as saying, "No man who owns his own house and lot can be a communist" (ibid., p. 156).

Across the planet, after World War II, America's image as a democracy, and as world economic leader also became a cultural model for consumerism and community-building. American images and ideas central to the lifestyle of its new suburbs – supermarkets, automobiles, superhighways, and motels – were exported to other nations. The American post-war dream was solidified in the form of the single-family suburban home, the cul-de-sac community, the local shopping center, and the family car, as opposed to the crowded, high crime, industrial cities.

The rise of global suburbs in Latin America

The first major development on the periphery of most Latin American cities was not U.S.-style "suburbs," but rather, the massive construction of spontaneous "squatter settlements" or "shantytowns," which began in the 1950s. By then, millions of rural migrants in the Americas were migrating toward cities in search of work. As we now know from more than five decades of research (Perlman, 1980; Neuwirth, 2004; Davis, 2007), these migrants arrived with virtually no liquid capital and no permanent source of employment. They soon became part of a booming "informal" street and housing economy, which only provided temporary sources of income, and no guaranteed right to own land. Faced with no real prospect for renting or purchasing homes in the "formal" housing market, millions of city-ward migrants chose to squat on, or invade, land parcels, usually on the outskirts of cities, and often in floodplains, canyons, on steep sloping hillsides or other less desirable land isolated from the "formal city." Over time, these temporary encampments of shacks and cardboard or wooden homes morphed into permanent slums, which now crowd the periphery of Latin America's urban areas, with few signs of going away.

Thus, the building of "suburbs" on the outskirts of Latin American cities is now occurring on terrain that was previously the domain of *asentamiento irregulares* (irregular settlements) – spontaneous colonization and informal settlement construction by the most disadvantaged citizens of Latin American nations.

But, over the last two or three decades, globalization has begun to reshape Latin American cities and their peripheries. The construction of highways, shopping malls, and new suburbs is

Downloaded By: 10.3.97.143 At: 23:11 11 Dec 2023; For: 9781315266442, chapter5, 10.4324/9781315266442-6

restructuring the outskirts, forming what has been termed an "archipelago" of gated spaces and fortified centers, all served by the automobile and all disconnected from each other. These closed off "islands" of activity include gated elite communities, malls, private schools, office complexes, and social or recreation clubs. The new developments are largely dependent on automobiles, and, in some cases, on private toll roads that allow the wealthy to get to work more quickly (Borsdorf et al., 2007). This pattern has been observed across the Americas, especially in Argentina, Chile, Mexico, and Brazil (Salcedo and Torres, 2004; Coy and Pohler, 2002; Jones and Moreno Carranco, 2007).

Today, two critical elements define the global suburbs evolving in Latin America. First, gated communities and fenced suburbs are booming, either wedged in and around the existing squatter neighborhoods, or on lands cleared of spontaneous settlements. These new gated suburbs have varying nomenclatures; they are called "*barrios privados*" (private communities) in Argentina, *condominios* in Chile, *conjuntos* or *urbanizaciones cerradas* (closed urbanizations) in Ecuador, *condominios fechados* (closed condominiums) in Brazil, and *fraccionamientos cerrados* (closed subdivisions) in Mexico. In Buenos Aires, middle- and upper-class suburban enclaves have been built; they are now surrounded by illegal settlements and garbage dumps. This emerging pattern has been termed "small-scale segregation" – wealthy and upper-middle class pockets amidst the poverty of the outskirts. The enclaves are fortified with fences and walls, but localized on plots that become available depending on topography, land markets, and other factors (Sabatini et al., 2001).

The second recent trend in the Latin American periphery is the building of "mega-projects," developments that are not merely gated communities, but, rather, "gated cities," giant complexes of 30,000 and more inhabitants – in Chile, Brazil, Argentina, Mexico, and elsewhere. Most of these complexes include residential, commercial, office, and light industrial development. One of the first mega-suburbs was Alphaville, on the edge of São Paulo, Brazil, which began construction in 1974. Scholars claim that Alphaville and other projects in São Paulo were influenced by North American ideas about suburbs and marketing (Coy, 2006). From Mexico to Brazil, we find evidence either of direct foreign investment in mega-projects, or the influence of foreign design and marketing strategies in building those projects.

The first U.S.-style suburbs

The first experiments with suburban developments occurred, not surprisingly, in Mexico's national capital, Mexico City. Many important cultural projects often begin in Mexico City, the nation's epicenter for cultural expression, economic power, and political decision-making. The first two experiments with the American-style suburb unfolded just after World War II – one in the northwestern part of the capital, in a development called Ciudad Satelite, the other in the southern part of the city, in the project known as Jardines de Pedregal. Because both were built in the late 1940s and 1950s, one could argue that if they did not outright physically copy the U.S. suburban model from that era (which was just then taking form to the north), they did embody the "suburban American imaginary," the narrative of the American suburb, of a place where one could escape the density of the city to a neighborhood closer to nature, and where one could own one's house and travel around with the modern convenience of the automobile. Both of these early Mexican suburbs borrowed heavily from references to the United States once they began to market themselves in newspapers and magazines (Capron and de Alba, 2010).

Jardines de Pedregal (Gardens of Pedregal) was planned and developed in the mid-late 1940s, on the Pedregal lava fields south of downtown where a volcano had erupted in 5000 B.C. The site was adjacent to an important pre-Colombian settlement called Cuicuilco, which was the largest city in the Valley of Mexico in 300 B.C. Luis Barragan, one of Mexico's most important

Downloaded By: 10.3.97.143 At: 23:11 11 Dec 2023; For: 9781315266442, chapter5, 10.4324/9781315266442-6

modernist architects, proposed to develop the new suburb. His idea was to promote harmony between architecture and the landscape.

North of downtown Mexico City, *Ciudad Satelite* (literally translated as "Satellite City") echoes the experience to the south. *Satelite* was made possible by the development of major highways, especially the ring road or *periférico*, which linked it to the wealthy districts in the west (Lomas Chapultepec, Santa Fe) and south, and the *viaducto*, which linked it to downtown and the airport. Like the Jardines de Pedregal, Ciudad Satelite was planned as a utopian suburb by architects Mario Pani and Luis Barragan. Pani and Barragan utilized the English garden city model adapted in early U.S. utopian suburban designs in places like Radburn, New Jersey and Columbia, Maryland. It included residential superblocks with cul-de-sac designs that separated pedestrian flows from automobiles and preserved huge swaths of green space. The architects employed a street layout system of wide oval circuits or "*circuitos*," each named for different professional careers – Scientists, Engineers, Architects, Sculptors, Economists, and Novelists. The plan was approved in 1948 and built over the next decade. Its status as a symbolic and functional center of the new modern Mexico was recognized by the 1958 completion of one of Mexico's iconic public art projects, the *Torres de Satelite* (Satelitte Towers), designed by Luis Barragan and Mathias Goerritz. These colorful high-rise, stone towers were metaphors for modern Mexico, a nation of high-rises and technology, though somewhat ironically they were located at the entrance to a mainly low-rise garden suburb.

Mega-projects and the new global suburbs

A signature example of a mega-project in Latin America is Santa Fe, a high- profile corporate and residential development planned and built in the 1980s and 1990s on the outskirts of Mexico City. Ten miles to the west of the historic center, Santa Fe was originally a toxic garbage dump where about 2,000 poor people lived in illegal cardboard shacks and earned a small wage recycling garbage. The squatters were eventually removed (and, later, from other parts of Mexico City) to make way for "mega-project" buildings, including giant corporate, residential, and commercial complexes such as those in Santa Fe (Valenzuela, 2007).

The idea was to turn Santa Fe into the new center of an emerging, increasingly global Mexico City economy, oriented more toward service than industry. Up until the 1990s, Mexico City's wealth was generated mainly by industry, especially import substitution, a strategy dating to the first half of the twentieth century that had become obsolete. Santa Fe was designed to house the free trade (NAFTA) companies that would be doing business in a globalizing Mexico by the twenty-first century, as well as all the high-tech, financial, computer, and other emerging post-industrial sectors. Planned and built in the 1980s and 1990s, Santa Fe became an enclave of multinational corporate headquarters, the new center for global finance in Mexico. Among the transnational (mainly U.S.) companies with headquarters here include Hewlett Packard, General Electric, IBM, Goodyear, Pepsi, Federal Express, and Kraft. There are five hotels with four and five-star ratings, 40 restaurants, and seven schools, including two universities. One of the city's largest and most lavish shopping malls, Centro Comercial Santa Fe, was built in the 1990s; it is one of larger malls in Latin America, with 300 stores and 14 movie theaters.

Santa Fe is symptomatic of the new globalized, elite suburbs appearing on the outskirts of cities throughout Latin America after the 1980s and 1990s, a kind of barometer of the fast pace of globalization, and the way in which it is producing a new type of urban region. It mirrors the qualities of "fortified enclaves" (Caldeira, 1996) in cities across the Americas – the emphasis on spatial segregation of the wealthy and upper-middle class, the heightened obsession with security, increasing privatization and the development of spaces of consumption (shopping malls)

Downloaded By: 10.3.97.143 At: 23:11 11 Dec 2023; For: 9781315266442, chapter5, 10.4324/9781315266442-6

as central to the identity of these suburban places. Another example, outside Puebla, Mexico's fourth-largest city, is the mega-suburb of Angelopolis. It has middle- and upper-income gated residential developments, five-star hotels, two private universities, three giant shopping malls, a business park, and a government complex. Observers report that enclaves like Angelopolis evoke a sense of elite separation, glass-enclosed malls and cafes where the upper classes sip frappuccinos and stare into their smartphones, further contributing to social fragmentation and polarization in Latin American cities (Jones and Moreno-Carranco, 2007).

The social ecology of elite suburbs and giant shopping malls raises larger issues about globalization, politics, and consumerism. This is clearly illustrated by the example of the "Wal-Martization of Mexico." Wal-Mart owns nearly a thousand businesses for its franchise in Mexico, not only Wal-Mart superstores, but also several other of national big-box style supermarket franchises (Bodegas Aurrerá, Superamas, Suburbias) as well as the popular Vips restaurant chain. Overall national sales among Wal-Mart-owned establishments in Mexico is estimated to be around $20 billion per year, with some 150,000 people employed. This makes Wal-Mart Mexico's largest private employer (Walker et al., 2006). Wal-Mart super-centers are one of the driving forces that perpetuate urban sprawl, by creating one single giant destination that requires larger numbers of automobile trips, while often causing neighborhood-scale commercial enterprises to go out of business.

Mass working-class suburbs

After 1950, most Latin American cities experienced massive growth in the form of unplanned, spontaneous land invasions and the building of irregular settlements, usually on the outskirts of urban areas. Over time, faced with their own inability to provide formal public housing for this huge wave of new urban dwellers, governments often assisted in the "regularization" of these districts. This included bringing in electricity, piped water, roads, and schools. However, because residents did not necessarily receive title to their land, and because services were not always provided, "urban social movements" evolved to mobilize squatters to defend their rights to their homes and neighborhoods, and their need for services (Foweraker and Craig, 1990).

Some national governments experimented with a policy approach that sought to build subsidized housing for the poor. In Mexico, for example, the National Housing Fund (FOVI) built over 800,000 units from 1970–1992; and the National Institute for the Development of Workers' Housing (INFONAVIT) built around one million units during the same time period. Not enough housing was completed, however, to address the massive demand (in the millions) for urban housing during this period of urban expansion in Mexico. Also, these housing units were mainly available to either salaried government employees or middle-income city dwellers.

Therefore, beginning in the 1990s, the Mexican government shifted its housing policy strategy, by converting INFONAVIT from a producer of housing to a financial institution. The new policy approach was market-driven, allowing those eligible to purchase homes, mainly in the suburbs, with financing through INFONAVIT. It made possible a new era of large-scale development in the periphery and opened the door to rampant sprawl.

A massive construction boom of master-planned, suburban housing developments followed. Many of the projects built low- and medium-density complexes aimed toward the middle and working-class sectors of the nation, and even toward the lower classes in some cases (Monkkonen, 2009). For the first-time, large masses of working and low-income Mexicans were being offered an alternative to self-help housing, with its uncertain ownership, and poor access to electricity, piped water, and paved roads. However, these new suburbs often contained poorly designed

Downloaded By: 10.3.97.143 At: 23:11 11 Dec 2023; For: 9781315266442, chapter5, 10.4324/9781315266442-6

homes in subdivisions that were located quite far away from shopping, schools, or other urban services.

Most of these suburban housing developments – sprawling on the edges of large cities like Mexico City, Guadalajara, Monterrey, Ciudad Juarez, Mexicali, or Tijuana – are being built by a handful of mega-home builders who have taken advantage of the change in government policy. They market these giant subdivisions by appealing to working-class desire for security and a better lifestyle. It has also been pointed out that young people in Mexico seek this kind of housing because they desire freedom and independence from their parents, a new trend away from the traditional model where children often remained with their parents even after they began to have their own families (Hiernaux and Lindon, 2002).

Some of the new developments are gated communities, while others are semi-closed. However, the vast majority of these developments lack well planned roads, any connection to public transit or other public services, like schools, hospitals, clinics, or shopping facilities. Observers have noted the poor quality of the houses themselves, the lack of a sense of community in the new districts, and the poor access to public transit. It's been argued that, rather than creating a solution to the housing and community needs of low-income families, the larger impact of these projects has been to enrich a small number of mega-construction companies (Garcia Peralta and Hofer, 2006).

Vertical suburbs: some examples from Brazil

The "vertical suburb" – a high-rise residential neighborhood – is the quintessential model for peripheral upper and middle-upper income communities in Latin America. The idea of a vertical cityscape is itself premised on a twentieth-century modernist idea in the world of architecture and city planning – the single tower isolated on a lot, and with open spaces around it. It was a product of the CIAM (International Congress of Modern Architecture), which emerged in Europe after its creation in 1928 by the Swiss architect Le Corbusier. This legacy of modern urban design had a huge impact on Latin America's modern city-building, one that remains today. For example, Corbusian high-rise urbansim was the approach adapted on a grand scale for the design and building of Brasília, the first planned national capital, with its stand-alone residential towers in the "superblocks" and high-rise ministries along the Monumental Axis.

Examples of verticle high-rise suburban growth abound in Latin American metroplitan areas, from Buenos Aires to Mexico City. Some of the best examples are found in the continent's most urbanized nation, Brazil. And within Brazil, the most illuminating case of vertical suburban growth is the São Paulo metropolis. São Paulo is one of the largest metropolitan regions on the planet, with nearly 20 million inhabitants. It is a primary center for global corporate headquarters, and thus one of the key financial megacities of the Americas. Its phenomenal expansion in the second half of the twentieth century inspired a scale of peripheral growth previously unseen in the Americas. In every sense, São Paulo represents a template for globalization and urban growth in Brazil, if not the rest of the world.

Since the 1980s urban space has become more and more "walled off," with the middle- and upper-income classes increasingly residing in their vertical high-rise enclaves, while the poor remain either in slum apartments (*corti os*) or *favelas*, the generic term in in Brazil for the poorest squatter settlement zones. For the wealthy, fear of crime led to the building of thousands of high-rise "closed condominiums," a Brazilian version of the "gated community" (Caldeira, 2000). São Paulo is a skyscraper mega-region, whose suburbs consist of complexes of luxury apartment towers and elite gated compounds. The compounds were inspired by the British garden city model, though unlike the original European garden cities, the São Paulo versions are entirely

Downloaded By: 10.3.97.143 At: 23:11 11 Dec 2023; For: 9781315266442, chapter5, 10.4324/9781315266442-6

automobile-oriented. Furthermore, they are distinguished by architectures of "social policing" – walls, fences, and private security companies (Caldeira, 1996). The primary gathering spaces are shopping malls, of which there are more in São Paulo than anywhere else in Brazil (Collet Bruna and Comin Vargas, 2009).

One example of an elite high-rise suburb in São Paulo is Alphaville-Tamboré, a gated community built in the early 1970s about 15 miles southwest of downtown São Paulo. It has been compared with the scale and style of Irvine, the giant suburb in Orange County, California. The community grew to some 33 gated developments, mostly high-rise condominiums, with a few low-rise, single-family gated areas. It has more than 22,000 residential units, and a population estimated at about 90,000, making it one of Brazil's largest elite suburbs (Gotsch, 2009). This mega-suburb has 11 schools, universities, shopping malls, and office complexes. Some 150,000 people travel in and out of Alphaville each day, which eventually led the company and local government to build a toll freeway for affluent commuters. The Alphaville project was so celebrated, the developer – Alphaville Urbanismo, S.A. – successfully proceeded to market it to many cities across Brazil, including Salvador, Fortaleza, Belo Horizonte, Manaus, Natal, and Rio de Janeiro.

Another notable vertical suburb is Barra da Tijuca, a mega-suburb of over one-quarter million people, on the outskirts of Rio de Janeiro, along the southwestern coast. It was designed by Lucio Costa, the master planner who designed the new capital at Brasília. Costa's Pilot Plan for Barra displayed much of the same thinking he had employed in Brasília – but Brasília was much more a public sector-driven plan with a great deal of emphasis on civic and national pride. Its design gave priority to monumental and ceremonial spaces. Barra da Tijuca emphasized residential space, private commercial shopping malls, and security. It became a giant seaside enclave for the affluent, a Brazilianized form of the American sprawl that has produced many of the same public health and environmental problems found in U.S. suburbs (Herzog, 2015).

However, in terms of the city's physical design, the parallels with Brasília are noteworthy. They include the creation of a cross-like design, much the same as the airplane-shaped morphology of Brasília. As he had done in Brasília, Costa emphasized in Barra the modernist principle of single-use zones, specialized sectors for housing, commerce, offices, and public buildings. The plan also had a monumental formality and a sense of abstraction typical of Costa's style. However, despite Costa's creative design instincts and his dream of socioeconomic equality, Barra became an elite suburb, detached from the urbanized core of Rio de Janeiro. It lacked walkable public meeting places, a feeling of community, or street life. Its dependence on automobiles is creating traffic jams and air pollution. It is regarded as an unsustainable model for Brazil's future urban growth, yet many Brazilians continue to prefer living in closed condominium developments in U.S.-style suburbs like Barra da Tijuca.

Challenges for global suburbs in Latin America

The suburbanization of Latin America has created a number of important policy challenges. They include: segregation, ecological destruction, sprawl, and isolation.

Segregation

As governments began exploring suburban-type development on the outskirts of cities in Latin America, the value of land often increased dramatically, thus raising the cost of any housing being produced. As a result, suburban development in places like Buenos Aires, São Paulo, Rio de Janeiro, Santiago, Guadalajara, and Mexico City has tended to exacerbate social class segregation. In the mass working-class suburbs of Mexico, mentioned earlier, the new developments tend to

Downloaded By: 10.3.97.143 At: 23:11 11 Dec 2023; For: 9781315266442, chapter5, 10.4324/9781315266442-6

segregate income groups within, while their lack of integration into the larger city is excluding these new suburban dwellers from urban life, creating a kind of "ruralization" of the city (Garcia Peralta and Hofer, 2006).

But in many new suburbs, land values have risen so quickly that large segments of the population are being excluded, thus enhancing social fragmentation. The example of Barra da Tijuca, the giant suburb outside Rio de Janeiro, is instructive. Once Barra's pilot land use plan was developed, real estate interests began purchasing land, driving up its value, and, as critics would note, turning it into a highly exclusive gated condominium beach suburb. From a population of 45,000 in 1980, Barra grew to nearly 250,000 by 2010, but the form of growth became even more privatized and exclusionary. Over time, observers noted that the development evolved toward more and more inward-looking gated complexes. Shopping malls began to add security and put up other real and psychological barriers to public entry. All of this was exacerbated by an urban plan that allowed large real estate interests to dominate the land market, further driving up prices at a time housing was becoming more expensive.

Ecological harm

Suburban development has caused the destruction of valuable ecosytems. Land is bulldozed, vegetation cleared, local ecological systems ignored. Returning to Rio's sprawling mega-suburb of Barra da Tijuca, the construction project has been profoundly damaging to the beach ecosystem. The Barra de Tijuca zone is called a "double barrier lagoon coast," due to its long narrow barrier island that is sited alongside a system of lagoons and waterways. This geographic formation of lowland lagoons, canals, and marshes is highly vulnerable to climate change. Storms and heavy rainfall cause strong tidal flows and shifts in waves that result in floods and the blocking of channels. This, then, causes "overwash," where waters back up into lagoons and flood-adjacent lands. Since global climate change is now understood to raise sea levels across the planet, lowland coastal zones like Barra da Tijuca are even more endangered by this phenomenon.

Urban sprawl in this kind of fragile ecological setting is problematic. Among other things, sprawl encourages fragmented development, which impedes managing coastal bioregions. This explosive growth in Barra has spread in sprawl-like fashion across the basin, invading the edges of canals, lagoons, and bays, encroaching on wildlife and interrupting the natural flows of water. Since Barra urbanized, the extent of flooding, landslides, beach erosion, and blocked waterways has exponentially increased.

Meanwhile, direct dumping of effluent from residential and industrial sites is the main source of pollution. Residential sewage comes from unregulated closed condominium complexes as well as from favelas in the lowland region. There is also an additional problem of garbage flowing into the watershed. The result is high levels of pathogenic microorganisms in the water, including coliforms and e-coli, all of which pose significant public health dangers (Zee and Sabio, 2006).

Automobile dependence/sprawl

From Argentina, Chile, and Brazil in the southern cone, to Mexico in the north, the vast majority of suburban developments being built are far from urban centers and not connected to any mass transit lines. The working-class suburbs constructed outside large cities in Mexico, for example, were built with virtually no bus or rail transit connections, few schools, shopping centers, or other amenities nearby, thus forcing millions of residents to become completely dependent on automobiles. This is a classic example of unsustainable urban sprawl. The Santa Fe mega-project outside Mexico City is also a community that is designed only for automobiles, with virtually

Downloaded By: 10.3.97.143 At: 23:11 11 Dec 2023; For: 9781315266442, chapter5, 10.4324/9781315266442-6

no efficient mass transit service. It is now one of the more congested places in the metropolitan zone. In the southern cone, the suburbs outside Rio de Janeiro, São Paulo, Santiago, and Buenos Aires display the same auto-centric design pattern.

Isolation

The immense social, cultural, and functional disconnect that many of these new suburbs experience has also led to a pattern of abandonment. In one study of new suburbs in Mexico, from 2006 and 2009, a shocking 25.9 percent of new suburbs were found to be unoccupied or abandoned. This amounts to some 356,000 homes nationally. Of that total, almost half of the homes have been abandoned. In Guadalajara, the same study suggests that, in one municipality on the edge of the city, called Tlajomulco de Zuñiga, out of 251 subdivisions built in the new suburbs, and over 57,000 homes, nearly 33 percent are uninhabited (Mendiburu, 2011).

Even those who have cars find the process of living in distant suburbs difficult. In Mexico, the federal government finally realized that the working-class suburban model was not working, and vowed to end the program that had been building so many sprawling, isolated, tiny, box-like houses (some as small as between 200 and 400 square feet) in the middle of nowhere. In the words of one Mexican government planning official: "I think that, yes, the model for the future should look for a development that is less horizontal and with more density" (ibid., p. 36).

Guide to further reading

Caldeira, T. (2000) *City of Walls: Crime, Segregation and Citizenship in São Paulo*. Berkeley, CA: University of California Press.

Coy, M. and Pohler, M. (2002) "Gated Communities in the Latin American Megacities." *Environment and Planning B: Planning and Design*, 29, pp. 355–370.

Davis, M. (2007) *Planet of Slums*. London: Verso.

Herzog, L. (2015) *Global Suburbs: Urban Sprawl from the Rio Grande to Rio de Janeiro*. New York: Routledge.

Jones, G. and Moreno Carranco, M. (2007) "Mega-Projects: Beneath the Pavement, Excess." *City*, 11, pp. 144–164.

Kunstler, J.H. (1993) *The Geography of Nowhere*. New York: Touchstone.

Sabatini, F., Caceres, G., and Cerda, J. (2001) "Residential Segregation in Major Cities in Chile." *EURE*, 27, pp. 21–42.

References

Beauregard, R. (2006) *When America Became Suburban*. Minneapolis, MN: University of Minnesota Press.

Berman, M. (1988) *All That Is Solid Melts into Air: The Experience of Modernity*. New York: Penguin Press.

Borsdorf, A., Hidalgo, R., and Sanchez, R. (2007) "A New Model of Urban Development in Latin America: The Gated Communities and Fenced Cities of Santiago and Valparaiso, Chile." *Cities*, 24, pp. 365–378.

Caldeira, T. (1996) "Fortified Enclaves: The New Urban Separation." *Public Culture*, 8, pp. 303–328.

Caldeira, T. (2000) *City of Walls: Crime, Segregation and Citizenship in São Paulo*. Berkeley, CA: University of California Press.

Capron, G. and de Alba, M. (2010) "Creating the Middle Class Suburban Dream in Mexico City." *Culturales*, 6, pp. 159–183.

Collet Bruna, G. and Comin Vargas, H. (2009) "The Shopping Centers Shaping the Brazilian City." In: Del Rio, V. and Siembieda, W. (eds.) *Beyond Brasília*. Gainesville, FL: University Press of Florida, pp. 104–119.

Coy, M. (2006) "Gated Communities and Urban Fragmentation in Latin America: The Brazilian Experience." *Geojournal*, 66, pp. 121–132.

Coy, M. and Pohler, M. (2002) "Gated Communities in the Latin American Megacities." *Environment and Planning B: Planning and Design*, 29, pp. 355–370.

Davis, M. (2007) *Planet of Slums*. London: Verso.

Downloaded By: 10.3.97.143 At: 23:11 11 Dec 2023; For: 9781315266442, chapter5, 10.4324/9781315266442-6

Duany, A., Plater-Zyberk, E., and Speck, J. (2000) *Suburban Nation*. New York: North Point Press.
Foweraker, J. and Craig, A. (eds.) (1990) *Popular Movements and Political Change in Mexico*. Boulder: Lynne Rienner.
Garcia Peralta, B. and Hofer, A. (2006) "Housing for the Working Class: A New Version of Gated Communities in Mexico." *Social Justice*, 33, pp. 129–141.
Gotsch, P. (2009) *NeoTowns: Prototypes of Corporate Urbanism*, Ph.D. diss. Germany: Karlsruhe Institute of Technology.
Herzog, L. (2015) *Global Suburbs: Urban Sprawl from the Rio Grande to Rio de Janeiro*. New York: Routledge.
Hiernaux, D. and Lindon, A. (2002) "Modos de vida y utopias urbanas." *Ciudades*, 53, pp. 26–32.
Jones, G. and Moreno-Carranco, M. (2007) "Mega-Projects: Beneath the Pavement, Excess." *City*, 11, pp. 144–164.
Kunstler, J.H. (1993) *The Geography of Nowhere*. New York: Touchstone.
Mendiburu, D. (2011) "Vivir en gueto." *Emeequis*, pp. 29–36. Available at: www.m-x.com.mx/2011-07-10/vivir-en-un-gueto/.
Monkkonen, P. (2009) "The Housing Transition in Mexico: Local Impacts on National Policy." Working Paper, D 09–001. University of California, Berkeley.
Neuwirth, R. (2004) *Shadow Cities*. New York: Routledge.
Perlman, J. (1980) *The Myth of Marginality*. Berkeley, CA: University of California Press.
Sabatini, F., Caceres, G., and Cerda, J. (2001) "Residential Segregation in Major Cities in Chile." *EURE*, 27, pp. 21–42.
Salcedo, R. and Torres, A. (2004) "Gated Communities in Santiago: Wall or Frontier." *International Journal of Urban and Regional Research*, 28, pp. 27–44.
Valenzuela, A. (2007) "Santa Fe: Megaproyectos para una ciudad dividida." *Cuadernos Geograficos*, 40, pp. 53–66.
Walker, M., Walker, D., and Villagomez Velasquez, Y. (2006) "The Wal-Martification of Teotihuacan: Issues of Resistance and Cultural Heritage." In: Brunn, S. (ed.) *Wal-Mart World*. New York: Routledge, pp. 213–224.
Zee, D.M. and Sabio, C.M. (2006) "Temporal Evaluation of the Contaminated Plume Dispersion at Barra da Tijuca beach, Rio de Janeiro, Brazil." *Journal of Coastal Research*, 39, pp. 531–536.