The Urban (in)Formal

Reinterpreting the Globalized City through Deleuze and Guattari

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Abstract

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This thesis provides a new definition of globalization within the social and spatial terrains of cities, one that is intricately linked to the growth of "informal urbanism," sub-market economies and the ad-hoc construction of slums. It argues that informality is not anomalous to the otherwise homogenized image of the contemporary global city, but rather forms a crucial part of an urban terrain created from a configuration of opposing forces, the formal and the informal, which are in a constant state of exchange.

In support of these arguments, this thesis draws upon Gilles Deleuze and Felix Guattari's *A Thousand Plateaus*. The theoretical source is crucial as it offers an interpretation of the city as an assemblage of disparate pieces, their relationships being a negotiation of "the smooth and the striated," the whole being a body like the "rhizome." These theorists supply this thesis' vocabulary and conceptualization, used as new tools for interpretation and description. This thesis then uses multi-scalar case studies informed by these writings in Rio de Janeiro, Brazil and Caracas, Venezuela, to reinterpret the globalized city. It considers each city's historical narrative, as well as the role of informality on the urban and neighborhood scales, to demonstrate complexity within the socio-spatial terrain of the city, developed from a interplay between many seemingly incongruous segments..

Reinterpreting the contemporary global city through the dynamic exchange between these informal and formal geographies, this thesis asserts that informality is merely a different expression of the forces that accompany globalization and in so doing it advocates for a more holistic view. It questions the bases of contemporary urban analysis and challenges prior research to reevaluate the very nature of how cities are considered. Informality is one piece of the urban terrain – a layering of disparate elements. It is a condition not yet adequately understood in the discourses of modern Western urban theory, but one that will offer some insight into the future of the metropolis.

Acknowledgements

The author wishes to express sincere appreciation to the Department of Architecture for its support of this thesis, and especially his advising committee: Mark Purcell for the inspiration, expertise and enthusiasm for urban design theory that he has imparted; and Brian McLaren, the chair of the committee, whose endless efforts and guidance have been indispensable throughout this process. This work, my success in this program, and any future achievements and aspirations as an academic would not have been possible without his mentorship, which will serve for years to come.

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Table of Contents

Chapter 1

Hyper-Urbanization and Informality in the Globalized City

Introduction

Despite the origins of...preexisting discourse, the phenomenal growth of cities around the Third World in the last four decades indicates that…the future [of discourse] lies in cities like Cairo, Rio de Janeiro, Istanbul and Bombay, and can best be investigated by looking at them.[1]

In the past fifty years, the world has evolved from a predominantly rural and agricultural population to one that is mostly urban. Political and economic shifts have facilitated the rapid expansion of cities while globalization and hyper-urbanization have brought dramatic changes in the socio-spatial urban terrain. This is especially true in the global south, where economic and political restructuring since the 1970s has led to huge influxes of populations to cities unable to handle such increases – creating situations of over-urbanization or hyper-urbanization. As a result, there has been tremendous growth of informal settlements – slums, shantytowns and barrios – and the informal, sub-market economies that blossom to support them. In fact, within this past half century, the larger share of global growth has occurred in these settlements on the edges of cities in the Third World. This thesis provides a new understanding of informality and its role within contemporary cities. This is achieved using an analytical framework informed by the terms and discourse of Gilles Deleuze and Feliz Guattari, and complemented by a review of secondary sources that consider the historiography of, and current issues surrounding, informal urbanism. This framework interprets contemporary cities as nebulous, dynamic bodies created from the intersections and exchanges between its parts, including those of seeming incongruity, all traversing the socio-spatial urban terrain together. This research then uses multi-scalar case studies in Rio de Janeiro, Brazil and Caracas Venezuela, to demonstrate how this alternative understanding of the contemporary, hyper-urbanized city can accommodate and validate the informal within its fabric.

1 Nezar AlSayyad, "Urban Informality as a 'New' Way of Life," in *Urban Informality: Transnational Perspectives from the Middle East, Latin America, and South Asia*, eds Ananya Roy and Nezar AlSayyad (Lexington, Maryland: Lexington Books 2004) 9

Image 1.1 An iconic image of a barrio in Caracas, Venezuela evinces the organic organization and seemingly fractal growth, an alternate spatial model in urban fabric. Photo by Yann Arthus-Bertrand.

The collapse of international borders for free trade, the speed and availability of information and communication, and the expansion of markets overseas have all facilitated large global shifts, economically, socially and politically. In response to crippling international debt caused by soaring oil prices in the 1970s, the World Bank and the International Monetary Fund led the massive restructuring of Third World economies through international liberalization, such as the deregulation of the agriculture industry. Eliminating subsidies led to the integration of rural areas into the global commodities markets, which dispossessed small landholders and led to the incorporation of farmland by multinational corporations. Former farmers fled to the city; the resulting urban migration was profound in size and difficult for cities to absorb. For the first time, population growth was decoupled from industrialization; cities' economies and their population could no longer be correlated. Similarly, infrastructural improvements could not keep pace, especially given a disproportionate amount of growth in poverty and slums, which did not contribute to municipal revenues via taxes. The inability of formal housing sectors and governments to provide for this influx enabled the accelerated development of the informal sector while increasing inequality. This disparity has been spatially expressed as informal settlements and socially manifested in the sectorial periphery to which some populations are sequestered.

Imge 1.2 Informality can be thought of as a valid to the given urban conditions, as much so as the commercial skyscrapers and housing developments adjacent and overshadowing them. Image available online at *Caracas 1010A* blog (caracas1010a.blogspot.com)

Informal urbanism - both ad-hoc settlements and sub-market economies – are often met with disapproval, stigmatizing slums and their inhabitants. Criticism comes from groups including government building and zoning departments, state officials, and various community organizations. They cite the chaos of unsanctioned and unsafe building techniques, the illegal use of public space, and, simply, the very nature of the communities, discordant to the idealized image of the modern global city. The result is a constant conflict between the two segments of the urban fabric expressed in the "creative destruction" - a euphemism for slum clearance - of vast tracts of shantytowns in the name of progress; the insecurity of land tenure within informal settlements; the design, construction and expansion of private and semi-public space to further segregate; and the grassroots campaigns within "informal" communities and economies with the explicit goal of inciting change and amplifying their voice when dealing with the formal sector.

The confrontation between these differing sectors belies the fact that both are equally important to the urban terrain. The same forces that are creating new urban networks, hierarchies and opportunities in cities are similarly fostering new relationships, potentials and exchanges, new assemblages within radical new conurbations around the world.[2] Indeed,

2 See Mike Davis, *Planet of Slums*, (Brooklyn: Verso 2006)

the unwieldy expansion and diversification of these urban centers necessitate a new interpretation of the city – one that accounts for the disparity and sectarianism within, and understands the socio-spatial terrain as a body composed of perhaps incongruent parts and their flexing linkages.

The urban slum is often characterized by overcrowded self-built housing, inadequate access to public utilities, and uncertainty of tenure. But the condition is also strongly associated with the processes of globalization and hyper-urbanization in rapidly developing countries - so much so that it has become integral to many of the cities in which these processes exist (image 1.1). At first a product of the hurried evolution of these cities, these informal geographies are in fact essential to the urban fabric.

Thus, this thesis seeks to better understand the phenomenon of informal urbanism, considering its evolving relationship with the formal as a means to interpret contemporary cities. Rather than anomalous or chaotic in their existence, informal settlements can be thought of as a valid part of the given urban conditions, as much so as the commercial skyscrapers and housing developments adjacent and overshadowing them (image 1.2). The formal and the informal have become intertwined, creating a new terrain that is nonetheless urban, perhaps more so because of its potentials, perhaps the future of the global city.

Central to this analysis is the construction of theoretical and analytical frameworks through which to interpret the socio-spatial terrain of the urban condition. For example, Henri Lefebvre's *The Urban Revolution* provides arguments that allow this thesis to problematize current discourse surrounding informality. In this book, which closely examines the historical development of the urban environment via semiotic, structuralist and poststructuralist methods, Lefebvre claimed that contemporary analysis was flawed. He reasoned that society was currently experiencing a *blind field* while in a *critical phase* of urban revolution, thus compelling new ways of measuring and considering the city. In that regard, a new interpretation of the city is reached through a close reading of Deleuze and Guattari's *A Thousand Plateaus,* which provides the language and conceptualization that guides this research. Specifically crucial are the arguments contained in the chapters *Rhizome* and

The Smooth and the Striated, both of which support a holistic interpretation of the city as a body composed of many disparate parts in constant exchange. This narrative strengthens the underlying theme of this thesis – that the urban terrain is, in fact, a complex choreography in which ostensibly discordant pieces such as the formal and informal are intrinsically linked: assembling, disassembling and reassembling in different combinations, their relationships and potentials being the core of the urban condition. Finally, to contextualize itself, this thesis considers the lineage of thought surrounding economic, political and socio-spatial aspects of informality to place it within the broader academic field.

This thesis also considers the issues surrounding recent, rapid urbanization in cities and the curious interplay between formality and informality therein, using an interdisciplinary analysis of specific cities in the global south to substantiate its arguments. Examining Rio de Janeiro, Brazil and Caracas, Venezuela as two case studies, it considers spatial and formal characteristics in relation to the social fabrics overlaid onto them and the economic, political and historical forces that shaped them. This thesis concentrates on these case studies through a multi-scalar analysis that examines each city generally, and then particular neighborhoods within them, to demonstrate the diverse ways in which informal sectors redefine how we understand cities, and in particular, the contemporary rapid urbanization and globalization taking place today in areas like the global south. It utilizes data and research that considers sociological, anthropological and geographical information, providing mapping, architectural documentation and interviews with residents in these cities and slums.

Informal Urbanism: Two Centuries of Thought

The evolution of existing scholarship on informal urbanism is vital to understanding the current urban condition. Mike Davis explains this chronology in depth in the controversial musings contained in his *Planet of Slums*, published in 2006 (image 1.3), which serves to inform much of this research. Davis' narrative recounts the changing discourse through a series of chapters with somewhat telling titles, such as "The Treason of the State;" "Illusions of Self-Help;" and "Haussman in the Tropics." In a similar manner, Ananya Roy and Nezar AlSayyad's *Urban Informality: Transnational Perspectives from the Middle East,*

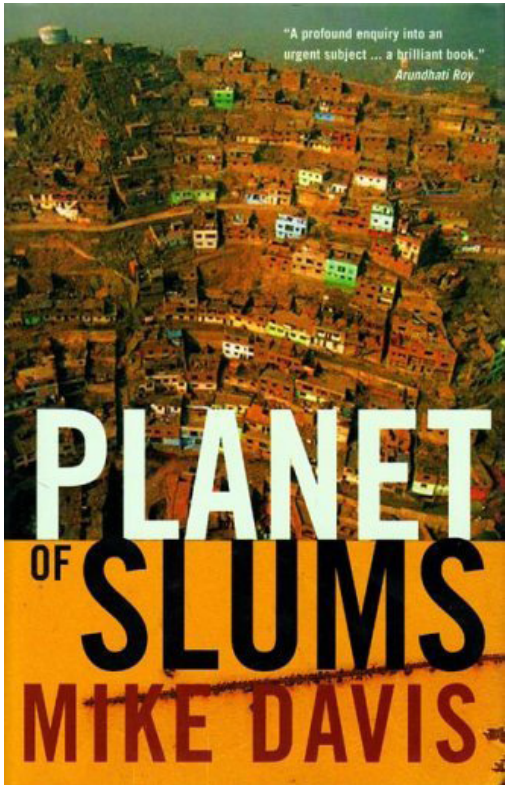


Image 1.3 Cover of Mike Davis'; *Planet of Slums*. Image of publisher.

Latin American and South Asia, published in 2004, expands our understanding of academic scholarship on the topi. While Davis' perspective – the entirety of his work, perhaps – is remarkably negative and at times dystopic, Roy and AlSayyad offer a more grounded account, explaining the ideological roots of previous discourse and the evolution of the discussion to what it is today, and specifically how it relates to globalization. These particular authors are indicative of the gamut of perspectives that have developed recently.

The first published discussion of informality was contained in James Whitelaw's 1805 *Survey of Poverty in Dublin,*[3] which reported on slum life in the city. However, it was not until the mid-nineteenth century that slums were recognized as an international phenomenon. These early critical reports were written with such toxicity that it was hard not to associate the communities and inhabitants with other undesirable characteristics.[4] The settlements were almost surely impoverished and impromptu, but studies tended to focus on the perceived crime and squalor, with little attention paid to anything else. Accounts also over-dramatized the conditions within the informal communities and sought to "solve" the problem of slums and improve the lives of inhabitants. These representations would go far in informing the popular opinions of the poor: Victorian virtuosity conflated slum living with moral depravity, judging the conditions through specific Eurocentric values. These structures would forever cast negativity onto the typology within academic discourse. Mike Davis reports that by the 1890s, literature had described various informal settlements as the "lowest sink of all," in Calcutta, or in Naples, as "the mostly ghastly human dwellings on the face of the earth.[5] [6]"

In was not until the 1950s and 1960s that scholarship began to change. Research started to focus on cultural aspects of informality, and a variety of opinions arose. For example, some reports hypothesized that the problems of informality could be directly linked to structural, uncontrolled cultural trends. Oscar Lewis, who famously argued for structuralism in

3 Davis, 20

4 The first published definition of "slum," according to Mike Davis, was in James Hardy Vaux' *Vocabulary of the Flash Language*, in 1812. Here, the term was synonymous with "racket" or "criminal trade." The word evolved to become associated with place – specifically the areas where the poor were living. Cardinal Wiseman, writing in the mid-nineteenth century about urban reform, is credited for bringing the term from the vernacular into academic discourse as it is used today.

5 Robert Woods et al, *The Poor in Great Cities: Their Problems and What is Being Done to Solve Them* (New York: Charles Scriber's Sons 1895) 305; Rudyard Kipling, *The City of Dreadful Night and Other Poems* (New York: Grosset & Co 1899) 71.

6 At the turn of the twentieth century, the United States Department Labor published the first "scientific" report of tenement life in the country. The report used a definition of slum that implied, if not asserted, similar moral judgments, describing its subject as "an area of dirty back streets, especially when inhabited by a squalid and criminal population." See Carroll D. Wright, *The Slums of Baltimore, Chicago, New York and Philadelphia* (New York: Arno Press 1894) 11-15.

The Culture of Poverty, perhaps best articulated this position. Basing his conclusions on studies of Puerto Rican informality in San Juan and New York City, Lewis claimed that pathological characteristics within poor families and communities were ultimately responsible for their social marginality and their place in the slums. He argued that by childhood, inhabitants had already adapted the "basic attitude and value of their subculture" of apathy and hopelessness. As a result, these young citizens were unable to engage with the changing conditions and take advantage of improving opportunities presented to them. Thus, the continuance of poverty and the "culture of marginality" could be blamed on the "cultural apathy of the poor," an ideology that would greatly affect proceeding research.

The Chicago School of Urban Sociology (began as early as 1938) also had a tremendous influence on the Western perspective on the urban condition and informality. The Chicago School promoted very particular types of research that emphasized social structures and environmental factors as determinants of human behavior. It focused on urbanization and increased mobility as major causes of social problems, and its interest in informality applied a clearly Western perspective on a global phenomenon:

> *"The Chicago School represented the first systematic effort to theorize the study of community and urbanism. In the city around them, its scholars witnessed patterns of rapid and dynamic growth driven by migration, which resulted in such recurring ecological patterns as invasion, survival, assimilation, adaptation and cooperation.[8]"*

Their methodology has been influential, using a dogmatic approach that has had far-reaching implications at various scales, but often leads to misinterpretation. For example, in *Man's Struggle for Shelter in an Urbanizing World*, published in 1964, Charles Abrams' based his conclusions on research techniques of the Chicago School. Abrams had assumed "a particular rural-urban continuum and a particular mode by which rural folks were transformed into urbanites.[9]" This led him to draw the conclusion that inhabitants of slums and informal settlements were merely urban migrants who had failed to complete the transformative cycle and be integrated into urban society. Indeed, Abrams and the Chicago School influenced ideas

7 AlSayyad, 8

8 AlSayyad, 9

9 LG Reynolds, "Economic Development with Surplus Labor: Some Complications," *Oxford Economic Papers* 21, no 1 (March 1969) 91.

about cities in the Global South that were incomplete or incompatible with reality. For the two decades following, the poor and informal communities that often housed them were regarded as an inherently deficient segment of society.

Previous discussions had addressed the phenomenon of slums and shantytowns, but the concept of the broader "informal sector" emerged only in the 1970s. It was during this era that it became clear that informality was an international issue that needed to be addressed and academics responded with a litany of writing. Some of the arguments were based in economics as it pertained to labor movements in cities during the two decades prior. Scholars began to relate economics to physical urban geographies, identifying labor trends as they related to new migration patterns, and presenting a binary view by focusing on the economics of the informal sector as opposed to the formal. One of the earliest to contribute to this line of thought, W. Arthur Lewis, offered a two-sector model that portrayed urban migrants and their employment as different than other urbanites and their formal employ. Lloyd George Reynolds would further this idea, describing these two parts as the state sector and a "trade-service" sector, the latter of which he described as "the multitude of people whom one sees thronging the city streets, sidewalks and back alleys in the developing countries.[10]" Keith Hart made the distinction in the 1970s between the two sectors based on types of employment : wage-based or self-employment. The urban poor were often denied access to wage-earning employment in urban centers, and were thus compelled to engage in petty capitalism, the root of informal economies. This sector was described as the unprotected or unorganized labor market, which Hart contrasted with the organized and formal sectors of the economy. This two-sector perspective of the urban economy also came to dominate the International Labor Organization's (ILO) working definition at the time, which characterized the informal sector by its ease of entry, reliance on indigenous resources, small-scale of operation, adapted technology, unregulated and competitive markets, and intensive labor. By 1978, Caroline Moser had used the dichotomous perspective of the city to develop a description of the informal sector that simply referred to "the urban poor, or as the people living in slums or squatter settlements.[11]" Thus, economics was validating a purely binary understanding of the city, pairing the economics and spatiality in conversations surrounding the formal and informal.

Around the same time, extensive anthropological and sociological work was undertaken in Latin America, directly

10 ibid.

11 C.O.N. Mosser, "Informal Sector or Petty Commodity Production: Dualism or Dependence in Urban Development?" *World Development* 6 (1978) 1051.

challenging Oscar Lewis' notions of the culture of poverty. This new research analyzed the phenomenon of informality beyond the parameters of commerce and labor, engaging the urban terrain in its entirety. Janice Perlman, for example, argued that social marginality (on which Lewis was hinging a large part of his argument) was a myth used for social control of the poor by those with wealth and power (image 1.4). Perlman challenged the then-common belief that structural issues associated with poverty were to blame for the phenomenon. She used her research to counter prevailing stereotypes and shift the paradigm away from previous reports that focused on imagined structural problems.[12] Similarly, Manuel Castells contended that marginality was, in fact, "a mechanism of collective consumption that determined the social order of the urban poor.[13]" Castells, like Perlman, asserted that citizens were, in fact, fully integrated into urban social networks - albeit in ways that led them to be stigmatized, culturally excluded, economically exploited and politically repressed. The two authors independently argued that these populations were motivated urban pioneers able to adapt to their situation and pursue social transformation. They emphasized the value of community culture and resistive political determination within settlements, supporting the notion that marginality was in fact an illusion, a strategy employed to control the urban poor.

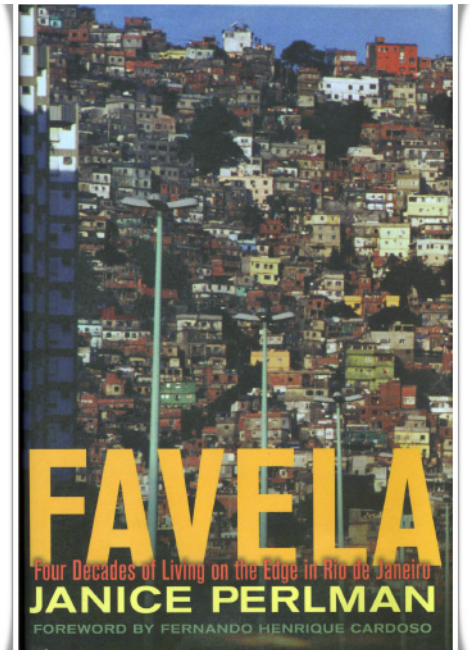


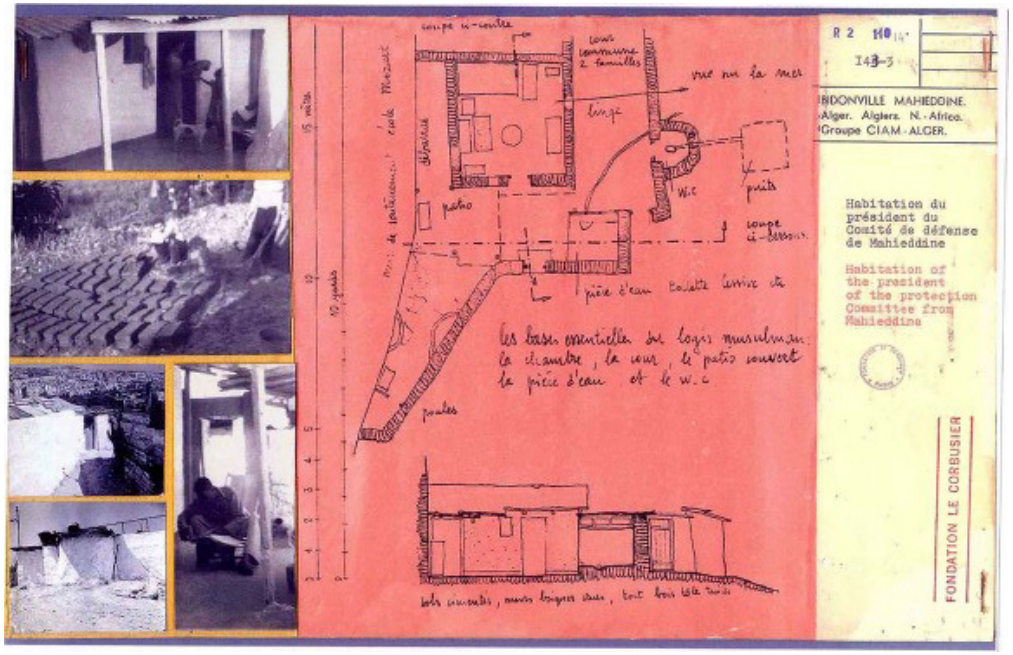
Image 1.4 Cover of Janice Perlman's *Favela*. Image of publisher.

The 1970s also witnessed a disparate, yet related treatise of self-help in the discussion of informalism. Focusing on ad-hoc, self-built housing, the argument advanced by architects such as John Turner and global leaders such as World Bank President Robert McNamara (from 1968-1981), viewed the unsanctioned settlements as a resourceful solution that was useful considering the failures of the host states to provide affordable housing options for the poor. Turner praised the adaptive ability of slum dwellers in the face of economic and political shortcomings of national governments. He commended these citizens for their ability to optimize their resources based on changing priorities; the nature of their communal self-organization; and their skills in incremental construction. The architect would eventually promulgate policies and programs

12 See Janice Perlman *The Myth of Marginality: Urban Poverty and Politics in Rio de Janeiro* (1976), and Janice Perlman, *Favela: Four Decades of Living on the Edge in Rio de Janeiro* (2010)

13 AlSayaad, 9

Image 1.5-1.6 (opposite) Analysis by Roland Simounet and the *Congres Internationaux D'Architecture Moderne*, supports Turner; they had previously discussed the positive aspects of informal settlements, extrapolating value in case studies ofAlgerian slums. Images by *CIAM Algiers* via *El Laboratoire Urbanisme Insurrectionnel.*

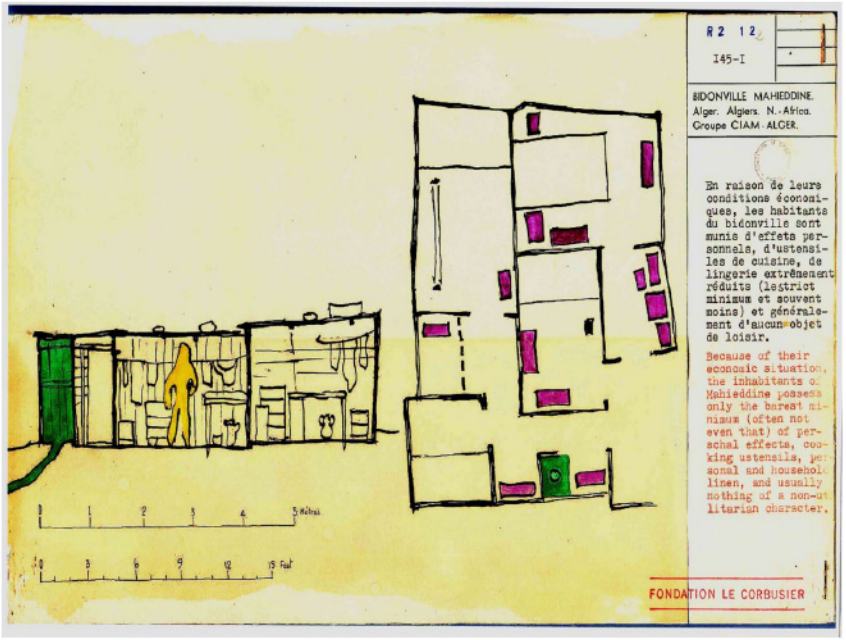


that championed what he had interpreted: a mixture of "self-help, incremental construction and legalization of spontaneous urbanization.[14]"

Turner's ideas about self-help were corroborated most notably by the Congres Internationaux D'Architecture Moderne, which had previously debated the positive aspects of informal settlements. The position of the French group of architects and planners was greatly influenced by the young architect Roland Simounet, who had undertaken a comprehensive study of Cite Mahieddine, a *bidonville*, or slum, in Algiers. Simounet and the CIAM pointed to significant positive qualities of the slums studied: the seemingly high degree of spatial standardization and equitability; the "organic" relationship between buildings and the site; the flexibility of spaces that allowed diverse functions related to the changing needs of the residents; and the synthesis of disparate customs, traditions and values of diverse inhabitants into a comprehensible pattern and urban fabric.[15] They concluded with prophetic musings glorifying informality, advancing the strengths of communities, and celebrating informal settlements as a plastic art situated on a "more social, even more ethical" platform (images 1.5 and 1.6).

14 Davis, 72

15 See Zeynep Celik, *Urban Forms and Colonial Confrontations: Algiers Under French Rule* (Berkeley: University of California Press 1997) 110-112.



But with greater reach than CIAM, Turner was able to influence and shape global outlook and policy by further romanticizing the situation. His ideas proliferated globally with the help of Robert McNamara, who had been seeking a practical, low-cost approach to the perceived urban crisis of slums. The World Bank's Urban Development Department, newly formed, supported Turner's argument for *in situ* upgrades, a strategy implemented "to make housing affordable to low-income households without the payment of subsidies, in contrast to the heavily subsidized public-housing approach.[16]" The World Bank's policies used Turner's discourse of self-help to justify massive downsizes in state commitments to address poverty and homelessness while simultaneously overstating and romanticizing the success of incremental informal settlements. But self-help was an illusion, idealizing the condition of informal settlements, manipulating and oversimplifying their relationship to economic, political and social fabrics within the city, and encouraging the massive inequality that grew as the global south experienced hyper-urbanization.

Attention has recently shifted towards a larger, global perspective regarding informality. Research has begun linking the accelerated growth of informal settlements and their population with the growing global interconnectedness of economics, politics and culture. As the world exchanges commodities and information at increasing speeds, and the

16 Cedric Pugh, "The Role of the World Bank in Housing," in *Housing the Urban Poor: Policy and Practice in Developing Countries*, eds Brian C. Aldrich and Ranvinder S. Sandu (London: Atlantic Highlands 1995) 64.

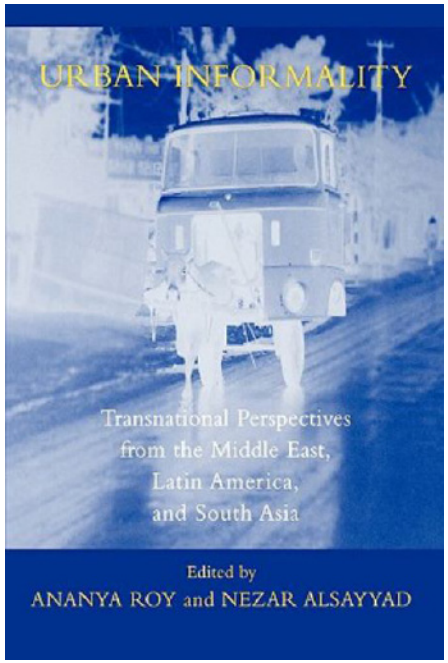


Image 1.7 Cover of Ananya Roy and Nezar AlSayyad's *Urban Informality*. Image from publisher.

global population rushes towards urbanization, the need to address the sprawling settlements of ad-hoc construction and self-built dwellings has become more emergent.

In studying relationships between informal economics, informal housing settlements and globalization, Nezar AlSayyad and Ananya Roy have argued that one must be careful with any attempt at universal understanding of informality. In *Urban Informality: Transnational Perspectives from the Middle East, Latin America and South Asia,* (image 1.7) These authors synthesize research from the 1980s to argue the crucial role of informal processes and geographies in shaping the urban terrain, situating "informality firmly within the larger politics of populist mobilizations and state power.[17]" Straddling Latin America and the Middle East, AlSayyad makes the case that informality is directly related to political and economic change in both contexts, albeit in different ways. Attempting a transnational adaptation or research, however, would prove futile, because each case of informality within a major city is most likely related to unique circumstances. AlSayyad specifically explains that the complexity of globalization and hyper-urbanization, mixed with unique economic, political and socio-spatial conditions precipitates site-specific informality, and thus necessitates site-specific interpretation. It is also clear that globalization and liberalization are currently changing the social and spatial organization of urban centers. Patterns and mechanisms that create international networks produce new geographies through "the proliferation of integrated international production and the growing hegemony of the International Monetary Fund and the International Bank for Reconstruction and Development [which] have promoted a worldwide regime of trade liberalization, reform of exchange rates and privatization.[17a]" The relationship between global economics and locally based informality has become ambiguous or hard to define, making it difficult to fully articulate why and how one has influenced the other, especially when returning to the local scale.

17 AlSayyad, 13-14.

17a ibid

Alan Gilbert has sought to reconcile the relationship between economic liberalization, rapid globalization and

hyper-urbanization (the freeing of international trade, capital flows, and labor markets) and the informal urbanism that follows. Studying Latin America, Gilbert illustrates that despite some success, such as the legalization of tendency and limited land rights and slum upgrades, globalization has, in fact, been the cause of an overall decline in living conditions in unsanctioned settlements. Gilbert qualifies his research; like AlSayyad and Roy, he stresses that no broad conclusions can be made about how liberalization has impacted informality, because it is constantly changing, influenced by both social and economic processes on both the local and global scale. Yet he does point out key notions that are crucial to understanding the complexity of economic liberalization as it pertains to informality.

Gilbert explains that liberalization, as promoted and supported by the state, is often quite different from actual ground-level liberalization. He notes that it is often impossible to delineate the boundaries between the formal and informal sectors, and therefore difficult to measure or judge informality – on economic, social or spatial levels. The result is a particularly ambiguous relationship between the two when it comes to something such as housing, the predominant program within informal settlements. The reality of conditions in many cities of the global south is one in which many citizens move freely and quickly between formal and informal sectors, and has roots that reach past globalization and hyper-urbanization. "Liberalization," Gilbert concludes, "creates new forms of legality and illegality. It destroys some forms of informality while creating new ones. Liberalization frequently produces contradictory effects, particularly when we consider its impact over space.[18]" Thus, Gilbert supports AlSayyad and Roy's claims that there is an inherent complexity in the relationship between the formal and informal in cities.

In regard to this complexity, AlSayyad and Roy have argued that the simple binaries associated with contemporary urbanization – such as, country/town, rural/urban, agricultural/industrial, traditional/modern, community/association, local/cosmopolitan - are no longer relevant in urban theory. For example, the influential Chicago School is often criticized for their use of outdated dualities and value systems to measure and monitor the "urban." Thus, when commenting on the layered nature of the socio-spatial terrain of cities, AlSayyad deduces that, at best, assumed correlations in the urban fabric are tenuous at best. This is evidenced by the real interplay between the formal and informal, one in which individuals

18 Gilbert is interesting to note because for the first time, an author is interpreting informality in a way that recalls Deleuze and Guattari. Taking an urban theory approach, Gilbert's discourse is crucial in that it begins to view informality not as separate from the mainstream city, but as something that is intrinsically linked to the formal, creating the urban terrain alongside it. See Alan Gilbert "Love in the Time of Enhanced Capital Flows: Reflections on the Links between Liberalization and Informality" in Roy and AlSayyad (2004) 33-66.

Images 1.8-1.9 (opposite) Dovey understands informality as a process of complex adaptation - segments of the city use assemblage as a means of resilience. Image is of markets that form along rail tracks in southeast Asia - they break down and reopen within minutes in response to train schedules. Photos by Kim Dovey.

belong to both sectors, and one in which informal processes reach beyond the urban poor into the formal lower and middle classes. Perhaps most compelling, this negotiation has given rise to "new forms and new geographies[19]" that must be accommodated in an analysis of the contemporary city, but are not even measurable or understood using these dualities. Informal settlements and submarket economies can no longer be characterized as disordered and impoverished – they are more accurately assessed as highly systematic, organized and economically diverse.

Given these facts, AlSayyad and Roy call for a shift in the analytical framework through which scholars discuss urban informality. They appeal for a critical transnational analysis that breaks free of problematic representation and biased knowledge and seeks an understanding of the complex processes within and without these spaces, the "paradoxes and contradictions" engendered in the relationships between informality and globalization and liberalization.[20]

Kim Dovey approaches informality through a novel framework of analysis, basing his arguments on Deleuze and Guattari's assemblage theory. For Dovey, informality – economic, spatial or otherwise – is a process of complex adaptation,

19 For example, AlSayyad notes that in Karachi, informality is no longer relegated to the poor, but the principal "avenue of home ownership for the lower-middle and middle classes," a phenomenon seen in other cities as well. See AlSayyad, 20.

20 Quotes from AlSayyad, 24; see Ananya Roy, "Transnational Trespassings: The Geopolitics of Urban Informality," in *Urban Informality: Transnational Perspectives from the Middle East, Latin America and South Asia*, eds Ananya Roy and Nezar AlSayyad (Lanham, Maryland: Lexington Books 2004).

which is subject to dynamic and unpredictable self-organizing patterns, facilitating resilience (images 1.8 and 1.9). His work synthesizes assemblage and complex adaptation theories, researching in cities in southeast Asia, to analyze informality - its spatial, social and economic expressions. He, like AlSayyad and Roy, asserts that these processes are integral to the way these cities function. Approaching informality across disciplines, he seeks to "understand these cities as multi-scalar assemblages and to explore the ways in which urban informality is linked to their growth, productivity and creativity.[21]"

Through his research on Lagos, Nigeria, Rem Koolhaas' interest started with the notion of "slum urbanism," and the development thereof. At the heart of Koolhaas' treatise on informality is an ideology that evokes John Turner in the 1970s and the CIAM in the 1950s. Koolhaas praises the slums, but stops short of romanticizing the phenomenon or excusing passivity. He enthusiastically remarks on the resourcefulness he witnesses: The way slum dwellers and informal workers are able to shift with the dynamics of the conditions presented; and the way the social and physical fabric has responded as it has outgrown its infrastructure (image 1.10). Koolhaas' approach is crucial to today's discourse because it "emphasizes the seemingly chaotic aspects of [the city's] development, but does so in order to highlight the homeostatic complexity of newly

21 Kim Dovey, "Informal Urbanism as Complex Adaptive Assemblage," *International Development Planning Review* (in press, white paper courtesy of author)

Image 1.10 The melee in Lagos, Nigeria has inspired Rem Koolhaas, who praises the resourcefulness of slums, the way their inhabitants are able to shift with the dynamics presented, and the ways the social and physical fabric has been reshaped in response to dramatic unforeseen circumstances. Image of Makoko shantytown in Lagos, Nigeria by Yann Arthus Bertrand.

evolving socio-economic structures, with the city conceived as a series of self-regulatory systems.[22]" The discussion is never about formal versus informal or other binary oppositions. Rather, it has become about the infinite pieces and layers within the city, the processes and potentials between them, and the resulting composition of the city. This approach asserts that informality is, in fact, a "precursor to a new kind of urbanism," one that is not necessarily fully understood in the discourses of modern Western theory, but might still be best suited for the challenges that will face cities in the future:

> *The ingrained vocabulary and values of architectural discourse are painfully inadequate to describe the current production of urban substance. They perpetuate an image of the city which is essentially Western, and subconsciously insist that all cities, wherever they are, be interpreted in that image; they systematically find wanting any urban form that does not conform. Our words cannot describe our cities with any precision of pleasure.*[23]

This thesis thus attempts to extend the body of knowledge regarding informality by fundamentally shifting the notions about the urban terrain. Whereas AlSayyad and Roy call for new frameworks through which to analyze the city,

22 Mathew Gandy, "Learning from Lagos," *New Left Review* 33 (2005) 39.

23 Rem Koolhass, "Fragments of a Lecture on Lagos," in *Under Siege: Four African Cities*, ed Okwui Enwezor, 175.

this research seeks to go further, addressing the need to restructure the way we consider and engage the urban construct. Furthermore, authors such as Gilbert, Dovey and Koolhaas still address the formal and informal as discrete sectors within the city, leading to further misinterpretation of the contemporary urban condition; this thesis questions that assumption. While Dovey is interested in the ways the informal sector is linked to the evolution and productivity of cities, he falls short of recognizing the complexity of that relationship. Hi writings underscore the importance of informality, but he still regards it as a separate realm. Similarly, Koolhaas defends informality as a valid product of dynamic conditions in cities, and engages the urban as a layering of systems, but does not critically examine the forces behind those systems. It is these forces and their interplay that this thesis ultimately questions, while acknowledging and examining the importance of the their socio-spatial expressions. Although Gilbert asserts key points that this thesis parallels, he confines his discussion to the relationships between liberalization and informality, neglecting a more holistic perspective. While he asserts that the formal and the informal are born from the same processes, and acknowledges the fluidity that exists between the two, his framework and narrative are economic in nature and do not address the competing processes that actually produce these conditions, and the relationships between them.

Most current scholars tend to examine isolated parts of the body of the city, hoping to draw information about the entire system, missing causal aspects that might provide more platforms for understanding. These narratives unequivocally begin by unpacking the informal then slowly working up to address the urban in its entirely, hoping to reveal global paradigms. In fact, even the arguments of AlSayyad and Roy, championing the need for new frameworks through which to analyze informality, they consider it separate from, albeit in a complex relationship with, the formal. While not subjecting their research to the formal/informal binary, they nonetheless seem to delineate a distinction between the two, if only because they lack a better alternative through which to describe the reality. Acknowledging the different characteristics of informality, this thesis distinguishes itself from this previous literature, asserting that these patterns are merely different expressions – different products – of the same forces and exchanges that generate formal sectors. The differences in these expressions might arise from the nebulous relationships between factors such as economic structures, social mechanisms and spatial organization patterns, but formal and informal geographies are in fact of the same stock, coexisting and overlapping each

other, together creating depth. This thesis insists that informality should not be considered by itself – perhaps not even in the physical form of the slum or in the phenomenon of sub-market economies. Rather, analysis should begin in a greater context, investigating the factors and influences within the urban terrain, forces that facilitate particular forms and social structures, an interplay of competition and conversation, moving the city forward by reshaping the socio-spatial terrain.

Disassociating "formal" and "informal" from spatial or economic manifestations, indeed allows the city to be evaluated, truly, as a terrain onto which relationships or potentials between forces, and thus their expressions, are constantly evolving. Previous authors overlook what this thesis seeks to expose by using Deleuze and Guattari's writing. The authors offer key concepts through which to best describe the continuous shifting, the changing linkages that shape the urban terrain. Specifically, the *rhizome* and *the smooth and the striated* both provide the conceptual basis to help understand the dynamic relationship between these urban phenomena. In that regard, understanding formality and informality as expressions of forces or relationships serves as a proxy to many other relationships that exist in the city. As the metropolis evolves from the urban to the global hyperurban, the speed at which the urban terrain reshapes itself is accelerating, warranting not just new tools, but entirely new perspectives. Urban theory must keep up to appropriately address the world around it; the implication of this thesis is that it is no longer useful to consider socio-spatial or economic forces within the city as permanent, inert objects, or predictable processes. Instead, the factors that influence and shape the city should be reviewed and engaged, understanding them as the warp and weft of the urban fabric. Constructing a framework that examines the urban terrain as a body created from responding and interrelated parts is perhaps a simplification. But, in doing so, this thesis reevaluates way scholars discuss the metropolis, moving the debate from one that is fixated on the socio-spatial expressions of these interrelated parts towards a discussion that includes the roots and relations between these forces.

Theoretical Frameworks and Methodology

This thesis will examine informal settlements and their place in the contemporary global city, seeking to understand how these novel geographies affect our understanding of the urban condition. To that end, it will construct an analytical framework by examining theoretical writings and then embark on a detailed examination of two major case studies.

Restructuring the discussion of informality, chapter two constructs new analytical frameworks and theoretical foundations by engaging key theorists and scholars. First, it uses a close reading of Henri Lefebvre's *The Urban Revolution* to consider the limitations of current analytical tools and frameworks. Lefebvre supports the claim that current understandings of the city are flawed because they are based on obsolete value systems. He applies a deeply historical narrative to his discussion of urban design theory, explaining that *critical phases* exist during society's transition between major eras of development; for example between industrial and urban eras. During these periods the socio-spatial terrain of cities evolves faster than the tools developed to interpret it. From this basis, it is deduced that the current urban condition is in another critical phase, and that society, correspondingly is attempting to analyze new geographies while caught in a blind field. Lefebvre's writings also provide a theoretical foundation upon which to develop an argument against current interpretations of informality as an interloper in the global city.

The second chapter then builds new paradigms of analysis and reveals new tools to measure and describe the city. To do so, it considers some fundamental ideas expounded in Gilles Deleuze and Felix Guattari's *A Thousand Plateaus*. Amongst other things, this work provides the vocabulary to discuss the formal and the informal; *the smooth and the striated* are key terms afforded by Deleuze and Guattari that help describe the pieces within the urban and how they compete and cooperate with each other, to shape and organize the city into changing degrees of formality. *A Thousand Plateaus* also supplies the conceptualization of conurbations as bodies created from a negotiation between incongruous pieces in constant dialogue. Like a *rhizome* they are bodies built not from several parts, or their entry and exit, but the exchanges and potentials – the *lines of flight* - that exist between them in various combinations and permutations that can be disassembled

and reassembled. This is the basis of *assemblage theory*, which largely plays into the interpretation of the city that this thesis asserts.

The third and fourth chapters of the thesis offer a comprehensive examination of the conditions in Rio de Janeiro, Brazil and Caracas, Venezuela. These two cases are examples of contemporary global cities that have recently developed rapidly because of increased international connection and complications related to economics and changing social patterns. Latin America is especially useful to consider. As a region, it has experienced accelerated growth, devastating economic decline, policy restructuring, widening economic disparity and other unforeseen conditions. The growth of ad-hoc settlements and sub-market economies characteristic of informality has outpaced the development of the city at large, the population increasing beyond the capacity of the infrastructure and the economy. While affluent citizens and government officials' attempt to impede and reverse invasion by the informal, their criticism is misplaced, the result of a blind field within the critical phase that these cities find themselves in as they transition to the hyper-urban. In short, this area has become a hotbed in which the seemingly incongruous parts are constantly interacting, negotiating and confronting each other, expressing themselves spatially through the formal and informal, shaping and reshaping new, exciting geographies.

Yet beyond recent rapid urbanization, these case studies offer a context less influenced by the biases ingrained in Western analyses of European urban models. The traditional representation of the city is in fact predicated on urban centers in the first world, which have developed through centuries of deliberate growth in which economies, infrastructure and populations, for the most part, matured simultaneously. As such, an institution of formality has been codified, and structures within and the striated forces that build formal parts of the city have been established and fortified through years of specific growth and spatial models. Latin America offers a different paradigm – one in which the conversation between the smooth and the striated is more evident, expressed spatially and socially in ways that would be quickly extinguished in spaces of the first world. Indeed, historical circumstance and the ability to ascend within international politics and economics has created in these two cities a new model characterized by constant sectorial friction – massive wealth borne from natural resources and strengthened through regressive tax policies juxtaposed against abject poverty – that recalls

Deleuze and Guattari's idea of *the smooth and striated.*

Both case studies chronicle influential historic episodes that have shaped the cities' form and spatial organization in the recent decades of globalization. Thus, analysis that considers the deep history of each state provides the background for a close reading of major political, economic and social changes that have occurred since Venezuela and Brazil have ascended to become forces within global markets. These events occurred over the last half-century, beginning in the 1970s, when major worldwide economics shifted, and the speed and ease of international trade and communication accelerated. The historical analysis is accomplished through secondary sources that focus specifically on Latin American political, economic and social history, as well as sources that address growing inequality and contemporary relationships between policy, economic strategy and informality.

These case studies consider the city on multiple levels, through an interdisciplinary approach. Each chapter addresses how informality fits into the larger socio-spatial urban terrain of each city; this is accomplished by discussing how it has manifested itself as ad-hoc settlements, and how the spatial and economic exchanges with the "formal" city tightly bind together the marginalized and the mainstream. To that end, this thesis uses sources that include data from economists, sociologists, anthropologists, historians, geographers, political scientists, and urban theorists. Information was also amassed from census data, city and state publications and international reports. Again, these sources varied in scope from dossiers specifically addressing the growth of slums to urban designs and narratives that offered growth projections and plans to accommodate them. Finally, this information was synthesized with architectural and urban spatial analysis, conducted by the author, which focused on the physical space. This was undertaken through the use of various sources including maps, photographs, and journals available online and in print, which documented the contemporary and historic conditions of the spaces of study.

Each chapter also focuses on specific neighborhoods within each city – Rocinha in Rio de Janeiro and El Torre de David in Caracas. Critical analysis at a second scale allowed for further grounding, and specifically provides a better

understanding of how informality affects the human experience. A deeper analysis of these neighborhoods was conducted by consulting multiple secondary sources. Rocinha and El Torre de David have both been well documented by previous organizations – both public and private – to various depths. For example, Rocinha, as one of Rio de Janeiro's most prominent slums, has been the subject of study by numerous parties, including municipal planning agencies, academic scholars[24] and architectural studies in major universities. Similarly, El Torre de David has been chronicled and detailed most recently by journalists, photographers and urban theorists,[25] supplying a wealth of information through which to understand the subject. Providing two case studies broadens the scope of this research by offering a variety of levels through which to verify the proposed frameworks that guide this analysis: While examining Rocinha in Rio de Janeiro, the study considers the place of the neighborhood and community within the larger city; dissecting El Torre de David in Caracas allows critical examination of how individuals navigate an urban terrain of both formality and informality. Both examples resist and challenge the dominant or popular urban narrative; together, a multi-scalar understanding is achieved.

The thesis concludes by revisiting the theoretical, historical and scholarly background established in earlier chapters, applying them to the case studies offered in Brazil and Venezuela. It reaffirms the need for new analytical frameworks - new tools to describe the contemporary urban condition - then asserts the interpretation presented here. Finally, it offers this research as a guide that can reveal new territories for analysis and understanding, conjecturing on the ways that future research might be shaped or influenced.

This thesis demonstrates how rapid urbanization over the last fifty years and the forces of globalization have drastically changed the socio-spatial terrain in some cities, expressed in the creation of social inequalities and spatial marginalization of many groups. It connects historic and modern processes to these disparities - the urban slums and economic marginalization. Yet it also understands informality as a phenomenon fertile with opportunity, one that is already intertwined with the formal, and one with even more potential for linkage and reintegration with the mainstream. This thesis affirms that the rapid hyper-urbanization of cities in the global south warrants a new interpretation of the urban condition. The new paradigm of the city compels us to reimagine it as a whole created from the expression of various forces

24 For example, see Janice Perlman's *The Myth of Marginality* and *Favela: Forty Decades of Living on the Edge in Rio de Janeiro* regarding the Favelas in Brazil.

25 Most recently the Urban Think Tank, headed by Alfredo Brillembourg and Hubert Klumpner, was awarded the Golden Lion for Best Project of the *Common Ground* Exhibition at the 2012 Venice Biennale for their collaboration with photographers Justin McGuirk and Iwan Baan on a project that documented and exhibited ideas about El Torre de David. The exhibit, called *Torre David / Gran Horizonte* resulted in a movie yet to be released and an accompanying book of the same name.

- pieces that exist in dynamic relationships of cooperation and antagonism, with endless potentials and exchanges between them. The socio-spatial expressions of these forces – the formal and informal – are resultantly the intricately woven weft and warp of a fluid, constantly shifting whole, amorphous, dynamic and authentic only in its entirety. This model could, perhaps, foreshadow the direction cities go in the future: a terrain with unforeseen depth, born from the act of becoming, the proclivity to assemble, disassemble, reassemble.

Chapter 2

New Frameworks for Analysis

Lefebvre's Perspective: *The Urban Revolution* and the Contemporary Blind Field

Henri Lefebvre's discourse on the socio-spatial terrain of the city is provocative when considering the forces that influence the post-industrial city (image 2.1). On a broad level, Lefebvre claimed that space is created from the social relations and the psychological and mental connections that society and individuals make to physical objects. He was interested in the projection these relationships or experience of them onto the physical fabric of the city. Many of these ideas are developed in Lefebvre's 1970 publication *The Urban Revolution,*[26] a direct response to the 1968 revolutionary movements seen throughout the western world (image 2.2). Understanding the social and physical as linked but independent, Lefebvre addressed the two by understanding the city as a set of historicized relationships that was defined by both synchronic and diachronic accounts. Using this approach, he reconceptualized the urban condition relative to the discourses of his time. Previous understandings engaged the city on a predominantly spatial dimension, and Lefebvre was particularly critical of urban planning and analysis that considered the city as a stable condition, a reading that usually subordinated the social aspects of space to the physical ones. Lefebvre insisted that the physicality was something separated from, but intimately linked to social relations. He interpreted the urban condition as a multiplicity of flexing readings, experiences and exchanges between both social and spatial segments.

Thus, Lefebvre's consideration of space as a socio-spatial expression contends that while there is a physical element to the urban, it is not neutral or static. He asserts that there is nothing inherent to it, but that it is constantly shifting - continuously being reshaped through fluctuating spatial relationships and social exchanges. These arguments challenged notions of predictable correlations between society and space, ideas that had been promulgated by urban theorists of his

26 *The Urban Revolution* was originally published in France in 1970; the first English translation was published in 2003.

Images 2.1-2.2 Henri Lefebvre was a French Marxist who worked in philosophy and sociology, especially as it applied to urban theory. His focuses included the critical analysis of everyday life, the notion of social space and the creation thereof, the difference between *the city* and *the urban*, and the transformation from one to the other. *The Urban Revolution,* which explores this transition, was originally published in 1970 in France; the English translation was published in 2003.

time and of previous era. He argued that this was a common problem during the time leading up to the social revolutions of the late 1960s.[27] Born from an understanding that these connections are constantly fluctuating and exist in multiplicity, he challenged previous value systems that built socio-spatial pattern recognition on the conceptualization of these networks as static. Relationships within the urban terrain are in fact not stable, so the language and tools to measure the city that are produced from this conceptualization are obsolete. Much of this vocabulary uses binary relationships to discuss the city, and failed to understand the urban fabric as something dynamic.

Lefebvre's critique of the dominant understanding of the urban at the time is seen in various parts of *The Urban Revolution*. In the chapter *Blind Field*, the author explained that an antiquated perspective - such as one that considers space separate from the social fabric, or the city as a static terrain - mars society's views of its surroundings. Lefebvre engaged the urban as something that evolved from the industrial, even though both exist within the city. In the book, he was especially interested in the development of the city from its past, tracing society's move from an agricultural stage to an industrial stage and then a commercial one related to the city. Tracing the growth of the urban from the rural and industrial, the author

27 Indeed,*The Urban Revolution* can be considered as much an analysis of the unfolding political events of his time as it was a critique of the theoretical approaches to the relationship between society, space and the state. Lefebvre was critical of previous ideologies such as structuralism and especially Stalinism, which he censured for its failure to respond to its context and produce a socialist state. He argued that the Soviet state had only copied the modern archetype of urban planning, in its cities, simply applying physical interventions to the the design and construction of them, while failing to engage the social aspects of space.

historicized the former as a product of exchange and commerce, things that have evolved from the industrial city. Yet this in evolution, he argued that society tended to view the world based on antiquated understandings of it, using value systems from previous stages (agricultural or industrial) to interpret current (urban) and future ones.

Indeed Lefebvre asserted that between end of the industrial and the dawn of the urban, there was a *critical phase* in which society is caught within an ambiguous and confused territory between the new and the old. Thus, there was a critical phase of blindness - or a *blind field* - between the rural and the industrial and again between the industrial and urban. This is manifested, most problematically, in society's attempts to form new relationships to the world around it. Reality is obscured and misinterpreted because the tools to measure and describe it are based on a world that is no longer relevant. This only leads to problems in understanding the city, with how it works and the relationships within it. As a result, society attempts to neutralize a world that it cannot, and tries to make transparent an urban fabric without the necessary tools. The result is urban space created from antiquated ideas and interpretations of the environment and a lack of full understanding thereof (image 2.3).

Lefebvre's arguments in *The Urban Revolution* have two major implications to this thesis. First, this thesis asserts that

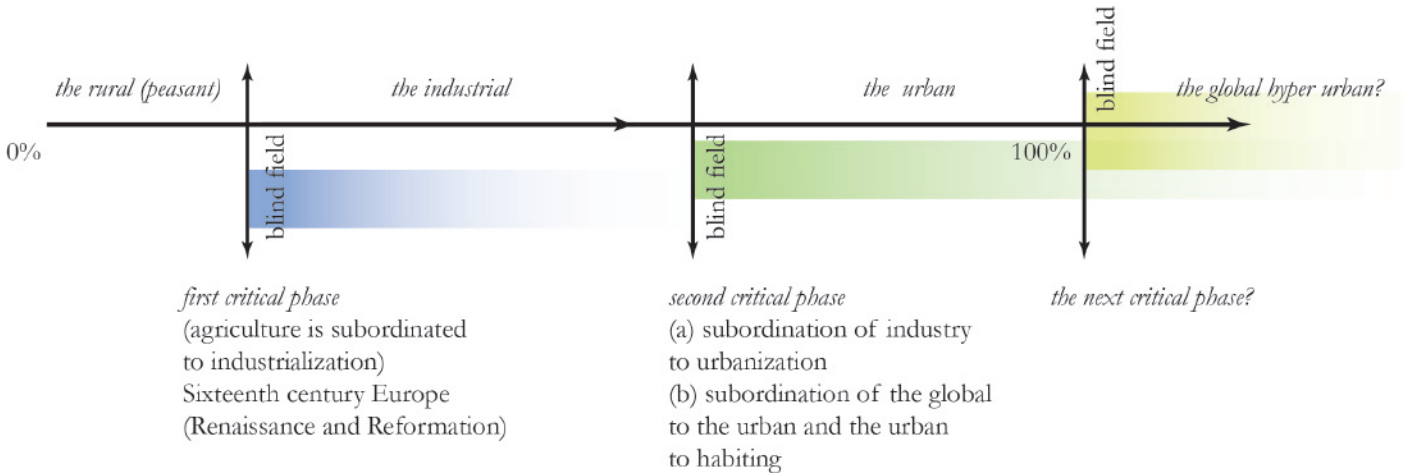


Image 2.3 A conceptual space-time diagram modified from Lefevbre's own. The axis is meant to represent the transition of society from the rural to the urban - the 100% represents where Lefebvre had placed it himself). The author notes two critical phases in which blind fields obfuscate society's ability to analyze the dramatically different world around them; this thesis suggests the next critical phase is upon us and seeks to address the shortcomings of current tools that measure and describe the city.

the shift from the rural and the industrial had different impacts on space than those between the industrial and the urban. The separation between the rural and the industrial may have been more dramatic in regards to formal aspects, but the implications that Lefebvre critiqued – essentially that society's blindness distresses the growth of the urban by imputing an archaic standard onto it – are better demonstrated in the move from the industrial to the urban. That is, the spatial change between the industrial city and the urban city is, perhaps, less notable than society's transition from the rural to the industrial but society's adjustment between the industrial and urban are greater. Exacerbating this issue, the value systems constructed during the industrial phase can perhaps endure longer in the urban, having greater influence on it, even if wrongly so. The result is an elongated critical phase and a persistent blind field between the two: The transition between the industrial and urban is a slow process in which the two are able to coexist.

Second, in viewing the more recent evolution of the city from urban to global (or perhaps hyper-urban) – a derivation that Lefebvre himself begins to make – it appears there is a *new blind field*. A new critical phase must be acknowledged - one that exists even while the last one still lingers. Lefebvre's ideas provide the foundation to understand the contemporary condition as something generated during society's evolution from locally-defined urban to hyper-urban or globalized urban, a condition totally different in character. This thesis argues that this condition has created spaces of "informality" have blossomed, though society seems unable to interpret them using now outmoded models of analysis. In fact, these writings of Lefebvre suggest an even more disarming possibility: Because the processes of hyper-urbanization, such as those taking place in parts of the global south, occur so quickly, analytical tools may never be developed at the same time. In such cities, the urban fabric reshapes itself so quickly that timely, appropriate analysis might be unattainable. This is especially true in cases such as Rio de Janeiro and Caracas, rapidly developing and hyper-urbanizing cities in states that have actively sought modernization with the resources available to them via globalization.

Lefebvre implied that the urban has textures and dimensions that do not naturally align with the politics of space. Forces of power - encapsulated by capitalism and the state and manifested in globalization and hyper-urbanization – have produced new socio-spatial textures in the contemporary city. But these new geographies might simply be the products of

misinterpretation and response during a new blind field. The current interpretation of the city is based on antiquated tools, wrongly neglecting informality when it should be considering it as a part of the overall urban terrain. Lefebvre calls for a new analytical framework through which to build an understanding of the contemporary city. In this vein, this thesis argues that informal settlements and the submarket commercial activities have until now been misunderstood as anomalies in the space of the dominant economic narrative. Informality is misread because in critical phase in which cities exist today – a blind field clouds a more complicated and inclusive interpretation of the urban fabric.

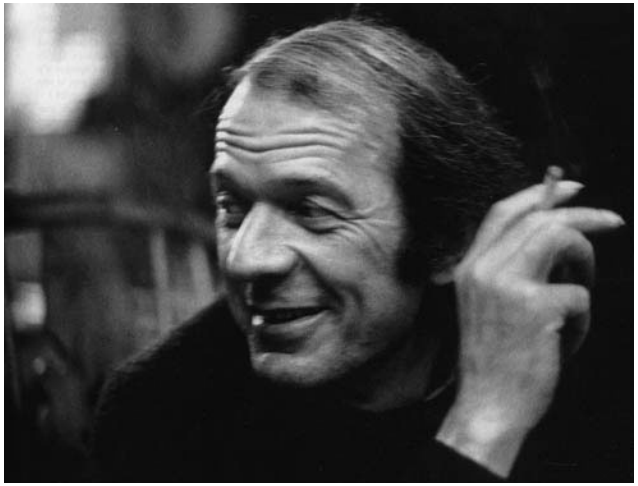
Image 2.4 Deleuze and Guattari use the *rhizome,* a botanical metaphor meant to represent a body composed of a complex network of exchanges, linkages and potentials. Although the scholars worked mainly in fields such as epistemology, philosophy and theory, the analogy is well applied to the consideration of the urban condition. The rhizome fundamentally counters the traditional tree-root system, an organization pattern with binaries in a clear hierarchy. Image from *Drugs and Medicines of North America*

Deleuze and Guattari: Interpreting *A Thousand Plateaus* in the Urban Context

In the introduction – or first *plateau* - of Gilles Deleuze and Felix Guattari's seminal *A Thousand Plateaus,* the authors use the analogy of the *Rhizome* to conceptualize any complex body. The metaphor of the rhizome, which serves as the chapter's title, serves to illustrate one of the book's key ideas. Deleuze and Guattari are most interested in engaging the concepts of discourse, interpretation, knowledge and theory, but this thesis argues that the idea of the rhizome is also relevant to an examination of the urban condition. Specifically, the rhizome is useful as an analogy that helps explain and understand the flows and exchanges between relationships – whether they be economic, cultural, political or otherwise - within contemporary cities. The socio-spatial terrain of the city might be accurately described as a *rhizome*, a body composed of a vastly sprawling chain of nodes, a botanical representation of an arrangement or assemblage that subjugates these points to the relationships between them (image 2.4). The rhizome allows for numerous and non-hierarchical points of entry, engagement and exit, and it counters systems of binaries and oppositions, represented by the tree-root system, which is clearly hierarchical. Within the body of the rhizome, in fact, it is not the individual points within the whole that are important, but rather, the exchanges and linkages - the engagements and potentials thereof, the *lines of flight* between.

FIG. 81.
Fresh rhizome of Actæa alba (large specimen, natural size).

Images 2.5-2.6 Gilles Deleuze (r) and Felix Guattari's discourse is instrumental to this thesis. The language and conceptualization in *A Thousand Plateaus* provides the vocabulary and complements the framework of this research. Image of Deleuze from HiLoBrow (hilowborw.com); image of Guattari by Kizumi Hirose via Tetsuo Kogawa (anarchy.translocal.jp)



These arguments of Deleuze and Guattari (images 2.5-2.6) are particularly applicable to the interpretation of cities, providing key terms that describe the urban terrain more appropriately than those currently used. Thus, Deleuze and Guattari's work supports the conceptualization of the city as a body in which various relationships coexist, are continuously broken down and reproduced, and only create the whole in their culmination. Like the rhizome in Deleuze and Guattari's analogy, the terrain of the contemporary city could be thought of as a singular mass that is anything but uniform, but instead is a whole made of its ever-changing parts. The urban fabric, like the botanical metaphor, is created from a continuously evolving set of potentials and relationships – social, economic, spatial, political, or otherwise. Entry and exit from this system is relatively easy – new ideas, persons and objects are continuously (and literally) introduced in cities all the time. The added value of these new elements stems from the pathway, the exchange or relationship between them and other points within the entirety. The authentic urban condition, therefore, should be understood as produced from the countless, shifting networks, the chaos, perhaps, generated from the infinite relationships that endlessly change.

The authors' writings also address principles of connectivity and heterogeneity, themes that resound in an understanding of space in the city. These points strengthen the comparison between the rhizome and the urban terrain:

Unlike trees or their roots, the rhizome connects any point to any other point, and its traits are not necessarily linked to traits of the same nature; it brings into play very different regimes of signs, and even nonsign states…It is composed not of units but of dimensions, or rather directions in motion. It has neither beginning nor end, but always middle (milieu) from which it grows and overspills…Unlike a structure, which is defined by a set of points and biunivocal relationships between positions, the rhizome is made only of lines: lines of segmentarity and stratification as its dimensions, and the line of flight or deterritorialization as the maximum dimension after which multiplicity undergoes metamorphosis, changes in nature… the rhizome is an acentered, nonhierarchical, nonsignifying systems without a General and without an organizing memory or central automation, defined solely by a circulation of states.[28]

In taking this approach, Deleuze and Guattari introduce a second conceptualization that helps to critically examine the city: the notion of *assemblage*, or more precisely, in French, *agencement*.[29] Deleuze and Guattari first reflect on the concept of assemblage in an attempt to advance the concept of rhizome as a metaphor for relational networks.[30] Contextualizing assemblage in their discussion of the rhizome helps reveal the authors' intent. For Deleuze and Guattari, assemblages are "a wide variety of wholes constructed from heterogeneous parts.[31]" In short, the rhizome is an assemblage. The authors expound on the historical processes that have produced these assemblages and their parts – which range from atoms and molecules to biological organisms and ecosystems—to give some background to their writings.

Considering assemblage in the framework of the relational networks in *Rhizome* one must infer a more usable conceptualization: the idea of wholes that are born from the interaction between components. From this understanding, assemblage theory can be applied to model any number of entities ("social justice movements are networked communities; central governments are assemblages of several organizations[31]"), such as the reading of urban space:

…cities are assemblages of people, networks, organizations, as well as of a variety of infrastructural components, from buildings and streets to conduits for matter and energy flows[32]

28 Gilles Deleuze and Felix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia,* trans Brian Massumi, Minneapolis: University of Minnesota Press: 1987) 21.

29 The exact translation of the French term is debated: though *assemblage* is generally accepted, *agencement* tends to be more specific in its meaning, referring both to a coming together or convergence, as assemblage denotes, but also particular arrangement or organization of the parts which come together.

30 It should be noted that Deleuze and Guattari remain vague or noncommittal in their explanation of assemblage. The organization and style of *A Thousand Plateaus* leaves a full explanation of these concepts under-developed, the characteristics unspecified, regardless of the fact that Deleuze and Guattari rely on these ideas throughout the text, constantly using them as tools in their discourse.

31 DeLanda, Manuel. *A New Philosophy of Society*. (London: Continuum, 2006) 3.

32 ibid, 6.

Here, the scholars make a significant move by associating their philosophy and theory with physicality, and thereby space.

Contemporary authors have utilized Deleuze and Guattari's ideas regarding assemblage in their attempts to interpret the city, both socially and spatially. For example, Colin McFarlane uses Deleuze and Guattari's ideas as the foundation for interpreting the city, specifically considering its spatiality as "processional, relational, mobile and unequal.[33]" What is especially compelling is that McFarlane, a geographer interested in informal urbanism, gives assemblage theory tangibility in his reading of the city. McFarlane asserts that the urban terrain is created from relationships that "are structured, hierarchized and narrativised (*sic*) through profoundly unequal relations of power, resource and knowledge.[34]" He views the city as produced from a series of assemblages that are caught in various degrees of accessibility – open or closed, shaped by mechanisms of power, economics, discourse and actors, yet never fully contained by them, always able to resist or exceed them. McFarlane's interpretation of the city through assemblage theory places emphasis on more than the changing relationships and exchanges, but rather the depth, potentials and processes involved with sites and actors within the urban fabric (image 2.7). Thus, he asserts that forces associated with globalization are problematic because they push towards uniformity, limiting or reducing the aspects. McFarlane argues that this theoretical framework can help expose the groups and narratives that have greater capacity and reach in rendering urbanism in particular ways over others:

> *…who and what has the capacity to assemble the city?...At stake here is the critical relationship between the actual and the virtual city, between the city that is and the city that might have been or that might otherwise arise*[35]

Deleuze and Guattari's vision of assemblage theory understands the elements of an assembly as contingent, rather than necessary. They view them as things that could be aggregated, disassembled, recombined and recomposed in infinite combinations. Although the term *rhizome* is primarily concerned with interpretation and knowledge, there are clear implications for the reading of space and social relations within cities, as authors such as McFarlane have shown.[36] Whether or not Deleuze and Guattari refer specifically to urban phenomenon, they implicate it, an assertion that becomes abundantly

33 ibid

34 Colin McFarlane, "The City as Assemblage: Dwelling and Urban Space," *Environment and Planning D: Society and Space*, Vol 29 (2011) 649

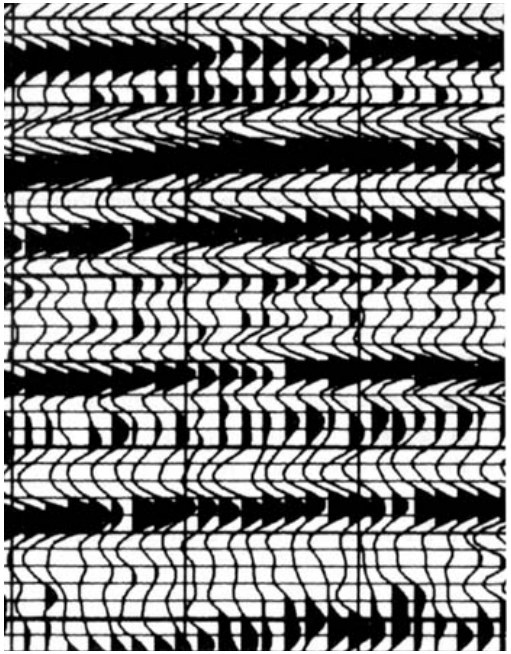
35 ibid 667

36 Kim Dovey is another contemporary urban theorist, who deals specifically with informal urbanism and assemblage. His work is discussed later in this thesis, as it is key to historiography of informality

Image 2.7 Colin MacFarlane's interpretation of the city utilizes assemblage theory. His discourse places emphasis on not just the changing relationships and exchanges within the city. but on their potentials, their depth, and the processes involved with all actors and geographies of the city. Image by Paolo Rosselli (paolorosselli.com)

clear in the application of their ideas to a consideration of urban space. This framework produces an understanding of the city as something created by the relationships, potentials, and processes between individuals, objects, structures and related systems. Viewing the urban fabric this way is especially warranted because assemblage asserts a scale smaller than global, but larger than the individual. Assemblage, in fact, continuously straddles and manipulates scale. Between the many parts of an urban landscape – the roads, the people, the buildings, the trees, the images – are the interconnections between them that make up the assemblage of place and of experience.

The implication is that these constantly changing relations are the threads that build the urban fabric. The spatial consequences are undeniable, and Deleuze and Guattari address them outright in later parts of *A Thousand Plateaus*. This is no clearer than in the chapter *1440: The Smooth and the Striated*, which reflects on physical space and the forces that create and shape it. In this chapter the authors systematically cover various case studies through which to understand the discourse regarding smooth and striated. These concepts are especially crucial to this thesis, which uses them as new tools for



Images 2.8-2.9 Pictoral representations of Deleuze and Guattari's narrative of the smooth and the striated. The two are different, but not neccessarily opposing, constantly negotiating, conversing and invading. They coexist, and spaces are constantly shifting between one and the other. There is never purely smooth space, never purely striated space, because in reaching that purity, there is an increased chance for the other to invade. Images from Christian Hubert Studio (christianhubert.com/writings)

interpreting and analyzing the city.

Deleuze and Guattari offer numerous "models" through which to exemplify their arguments regarding the smooth and the striated: the technological model, the musical model, the maritime model, the mathematical model, and the physical model. Each case study illustrates the salient points, each illuminating the characteristics of smooth and striated that are relevant to a vision of space, and are highly applicable to the interpretation of the city.[37] Through these examples, the authors' conceptualization comes into view. Striated space is associated with the state (government) and the static, while the smooth is oriented towards the nomadic, the amorphous, and the fixed. The striated is divided, linear, sedentary, homogenous – it separates difference by categorizing and subordinating lines, trajectories and paths to the points they connect. The smooth is amorphous, informal and subordinates the dwelling to the journey, the points to the path (image 2.8-2.9). Rather than opposition, the two exist as layers in constant negotiation, confronting each other. The differences between the two are not contradictory but dialogic:

37 Deleuze and Guattari's discourse regarding the smooth and the striated can, in fact, be applied to a number of fields, including philosophy, rhetoric, theorization, etc, which seem more in line with the general themes of the body of their work.

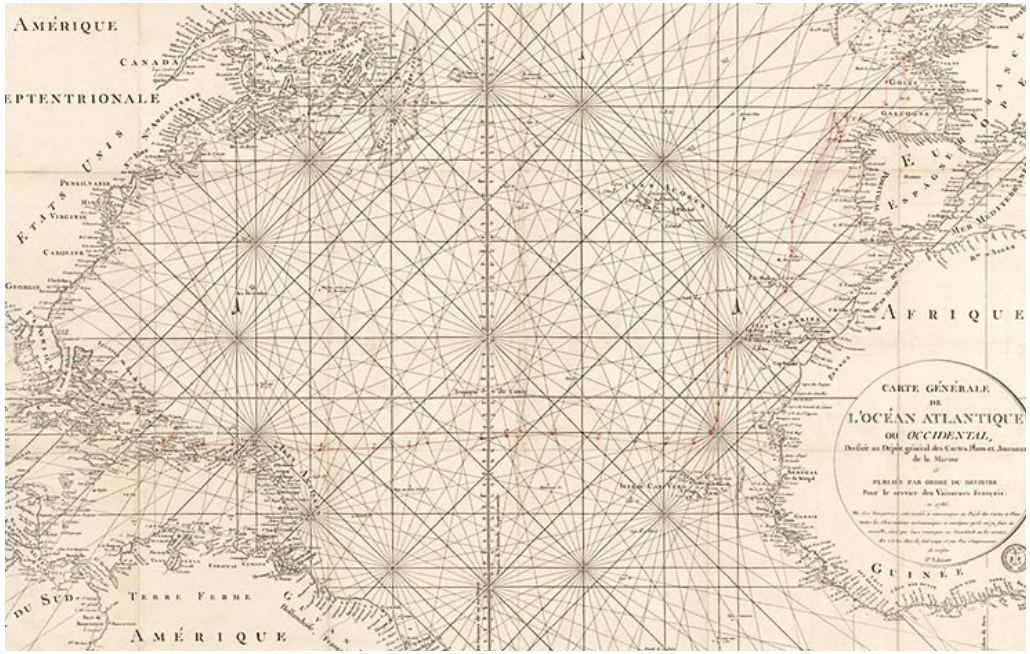


Image 2.10-2.11 Deleuze and Guattari's "maritime model" is especially useful in illustrating how the smooth and the striated invade and consume one another: The sea was the ultimate smooth space, devoid of direction or segmentation, until 1440 when, for commercial and political reasons, it was subjected to striation via maps and bearing based on astronomical data. 1440 chart of Mediterranean Coasts (l) via website "Latitude and the Origins of Global Navigation," Patricia Seed (ruf.rice.edu/~feegi); 1792 map of Atlantic Ocean by Dépôt des cartes et plans de la marine, France.

> *Smooth space is filled by events of haecceities, far more than by formed and perceived things. It is a space of affects, more than one of properties. It is haptic rather than optical perception. Whereas in the striated forms organize a matter, in the smooth materials signal forces and sever as symptoms for them. It is an intensive rather than extensive space, one of distances, not of measures and properties.*[38]

Deleuze and Guattari imagined the smooth and the striated existing in constant friction, challenging each others boundaries, spilling into, affecting and shaping each other. No space is ever entirely smooth, no space is ever entirely striated. This argument may be best demonstrated best by the authors' description using the maritime model. The authors explain the relationship: "For the sea is a smooth space par excellence, and yet was the first to encounter the demands of increasingly strict striation.[39]" The sea is, upon first examination, an endless expanse of ambiguity and possibility, a space created by infinite directions because of the existence of none, and the possibility for infinite trajectories or changes in the path. Although at one time the sea was a space belonging to "a nomadic system of navigation based on the wind and noise, the colors and sounds of the sea,[40]" striation was placed onto it. In this description of the sea, the authors explain how

38 Deleuze and Guattari, 479

39 ibid

the act of navigation was first consumed by an effort to organize the journey. This striation of smooth space was for two particular astronomical and geographical benefits - maps and bearings - on open water (image 2.10). This became a catalyst in the year 1440 for the first striations: the division of the sea by latitude, the mapping and charting of this primal smooth space for the benefit of commerce and cities – the state. The product was the invasion of the smooth by the striated: "A dimensionality that subordinated *directionality*, or superimposed itself upon it, became increasingly entrenched.[41]" The smooth is the interlacing, the layering of connections between any and all points – it is the possibility of direction in the sea, the act of becoming or the act of going.

In this analogy, the sea was once smooth and, since 1440, has been subject to constant striation. Although the smooth is different than the striated, it is not necessarily its opposite. Deleuze and Guattari characterize the striated as a force of separation, of categorization, and a phenomenon that seeks to segregate difference. It is thereby homogenizing. The city is a space demonstrative of the striated qualities that the authors speak of – the forces of commerce and the state have led to categorization, division and segregation. But internal forces in the city also confront the striation. Just as the fundamentally smooth space of the sea compelled striation, so does the city precipitate smoothing. The city creates smooth space within itself, and outside of itself, at different scales. Smooth spaces arise as a counter attack to the static and sedentary, the state-oriented categorization and homogenization. Where striation might be thought of as the formal economic sectors or the generic forms and predictable patterns of the city, smoothing can be imagined as informal urbanism – the organic geographies of slums and the sub-market economies created. In this sense, the contemporary urban terrain - and in fact the entire discourse of the globalized city and the relationship between formality and informality within - might be interpreted as another case through which to understand the *smooth and the striated.*

Deleuze and Guattari note that smooth spaces appear in different forms, resisting and countering the dominant forms of the striated. Such is the case with the relationship between the formal and informal: the informal and subversive negotiate with the dominant narrative, the championed image of the city, which often tries to eliminate or conceal it. The authors' interest in the slum is explicit; these new forms of smoothing providing evidence of a continuously changing

40 ibid

41 ibid, 479-480

relationship of layering and alternating between the smooth and the striated.

> *…combining the smooth and the holey and turning back against the town: sprawling, temporary, shifting shantytowns of nomads and cave dwellers, scrap metal and fabric, patchwork, to which the striations of money, work or housing are no longer even relevant.*[42]

This last issue is the central argument of Deleuze and Guattari's discussion of the *The Smooth and the Striated.* The authors stress the importance of the relationship between the seemingly incongruous pieces, or forces. They are not a binary set of oppositions, but coexist in an interplay and conversation, layering and overlapping on each other in different combinations to produce a collage of different expressions. Deleuze and Guattari admit that there are probably no purely smooth or striated spaces – there are none in the urban fabric - and that the reality of space, whether it is biased one way or the other, allows for and facilitates their coexistence and friction, compelling each to flex, move or engage.

> *Smooth space and striated space – nomad space and sedentary space – the space in which the war machine develops and the space instituted by the State apparatus – are not of the same nature. No sooner do we note a simple opposition between the two kinds of space than we must indicate a much more complex difference by virtue of which the successive terms of the opposition fail to coincide entirely. And no sooner have we done that than we must remind ourselves that the two spaces in fact exist only in mixture: striated space is constantly being reversed, returned to a smooth space.*[43]

Deleuze and Guattari's writing is especially intriguing because it they sought to remove it from an immediate context. The authors approached philosophy detached from larger structures, such as capitalism, and the expectations or obligations to their corresponding logic systems. Yet still, their writing provides the means through which to consider the city; this thesis builds a new framework by using the terms and ideas explained in *A Thousand Plateaus.* The ideas captured within the volume offer more precise instruments that this research uses to understand the city: the *rhizome* and an analogy of the urban body; *the smooth and the striated* as the interplay and conversation between forces that create formal

42 ibid, 481

43 ibid, 474

and informal spaces. Analysis of the urban condition moves away from oppositions constructed on the assumption of static relationships and singular historic narratives, advancing the possibility that commonly thought of binaries exist as product of a forces that are as cooperative as they are antagonistic, enduring in far more complex relationship of invasion, subterfuge, cooperation and overlap. Interpreting the city as a body created from assembling and disassembling elements compels this thesis to go beyond the idea of informality as isolated from or opposed to the formal. Instead, it requires the consideration of the relationships between things, and further, the forces that shape these relationships and influence their socio-spatial expression. Deleuze and Guattari are essential: At the core, their discourse informs a different way to consider the city, looking beyond the pieces of it, subjugating the physical as expressions of latent forces that have greater influence.

Chapter 3

Case Study Rio | A Non-Conforming Spatial Model

Introduction

> *[The] spatial and temporal manner in which Rio's favelas have evolved defy most attempts at convenient generalization. Rather…[it is] a dynamic phenomenon that is constantly changing both within itself and in its relationship to the specific character of Rio's urban structure. The changing locational patterns of Rio's favelas tell us a great deal about the linkages that exist between economy, society and politics and how these are manifest in that city's urban space.*[45]

Rio de Janeiro's evolution into prominence as an international city has been greatly influenced by several forces that have expressed themselves both economically and spatially. Like many Latin American cities, the former Brazilian capital was subject to a European crown in its initial development, and was later affected by planning ideas from abroad and economic strategies seeking to integrate the country into the world. That these pressures greatly changed the course of the urban growth of Rio is unquestionable. It is the peculiarities of the city's development and its spatial context that has made its development so unique. Understanding the patterns and stages of Rio de Janeiro's growth helps to reveal how globalization has shaped the social and spatial terrain of cities and to interpret the informal responses by some individuals.

Rio de Janeiro's maturity into the modern megalopolis it is today reveals its character as a complex and diverse urban center. It is a globalized city in both function and image (image 3.1 and 3.2), yet throughout the historical processes of economic and urban change that brought it to its current state, the physical fabric of the city has changed in unpredictable ways. Rio has, like many cities that have been subjected to rapid urbanization, nurtured its rural beginnings into an industrial strength and an urban motor. This has fostered the uncontrolled proliferation of self-made and unsanctioned settlements

45 Greg O'Hare and Michael Barke, "The Favelas of Rio de Janeiro: A Temporal and Spatial Analysis," *GeoJournal*, no 56 (2002): 225

Images 3.1-3.2 The image of Rio de Janeiro, Brazil as a modern, globalized city is reflected in is physical space and social networks. Images by luizphilip on flickr.com (via unlostwanderer.worpress.com) and Sergio Moraes - Reuters/ Landov via Encyclopedia Britannica (brittannica.com)

(image 3.3 and 3.4) – Brazilian *favelas* that have sprung up and rooted themselves as Rio has grown.

The socio-spatial fragmentation of Rio's urban terrain is the product of the city's rapid, unwieldy population growth. This growth, unlike the development in more traditional cities, has not been met or accompanied by expected industrial expansion. Favelas have followed the ascent of the city through its historic narrative, appearing and expanding in parallel to the continued development of Rio's sanctioned, formal urban terrain. But informality as a whole in Rio has grown faster than the formal sector, in terms of housing, infrastructure and commerce. Yet economically and spatially the two are so intertwined that they are creating new urban geographies that align with current interpretations of the globalized city. For example, Rio de Janeiro contradicts common spatial paradigms that some urban geographers use to describe informality. These scholars often promulgate the notion that slums are relegated to the peripheries of their host cities, while few settlements stake claim within proper city limits. This spatial opposition tends to oversimplify reality - claiming that newer growth of favelas takes place only along the edges of the city, while the city proper, though punctured with older slums, largely remains formal and organized in nature. Rio de Janeiro instead provides a compelling example of an alternate

Images 3.3-3.4 Uncontrolled growth of favelas throughout Rio has been facilitated by a number of economic and political factors. Images by Mike Reyfman (mikereyfman.com) and Yann Arthus-Bertrand (yannarthusbertrand2.org)

model. The spatial organization of the city allows a diverse set of socio-spatial, urban narratives – formal and informal – to coexist. The city is a patchwork of sanctioned development and favelas alongside it; they intersect and overlap because of their proximity. Slums and sanctioned development have grown together historically, together pushing the physical limits of Rio outward.[46]

This chapter considers Rio de Janeiro as a new, hyper-urbanized city, a product of internal economic and political forces as well as the international integration that has taken place in the past fifty years. It contextualizes this analysis within the historical narrative of the state and city, examining its maturation from a Portuguese colony into a globally linked urban center. It reflects on the forces that shaped the urban terrain into what it is today – a pixilated, rather than bifurcated, model of spatial segregation and social exclusion. Rio is a city molded by rapid urbanization since the 1970s, its physical structure and urban organization evolving alongside a social fabric that intertwines the resulting formal and informal. The assertion that follows is that this pattern creates a more authentic urban experience in which diverse objects and individuals interact and negotiate.

46 For more information regarding the common "center and periphery" model of informal settlement development, and specifically its application in Brazil, see Luiz Cesar de Queiroz Ribeiro and Luciana Correa Do Lago, "Restructuring in Large Brazilian Cities: The Centre/Periphery Model," *International Journal of Urban and Regional Research*, vol 19, no 3 (1995):369-382, and Helia Nacif Xavier and Fernanda Magalhaes, "The Case of Rio de Janeiro, Brazil," in *Understanding Slums: Case Studies for the Global Report on Human Settlements Urban Slums Report* (2003)

After an analysis of the urban terrain of Rio as a whole, and an examination of the role of informality within this fabric, the chapter shall undertake a discussion of Rocinha, a specific, favela that will provide the basis to understand this situation on a more intimate, human scale (image 3.5). Through this spatial and temporal analysis, this case study will assert that Rio provides an alternative paradigm through which the globalized city can be understood. A discussion relating this case study to the critical analysis of history and theory in previous chapters shall be undertaken in a subsequent chapter.

Images 3.5 This case study examines the larger context of Rio de Janeiro on the urban scale before examing Rocinha, a specific, well documented favela. Engaging in a multi-scalar analysis will demonstrate the variety of ways the interplay and relationship between the formal and informal express themselves on the socio-spatial terrain. Below, a map of Rocinha, from analysis by Meggan Skilling, University of Minnesota.

Pixilated Rio: The Evolution of Favelas Throughout the Urban Core

The development of Rio de Janeiro from its colonial roots into a contemporary city has been a process unlike that typical of most Latin American cities. Its growth has been strongly influenced by a number of forces unique to the historical and physical conditions that presented themselves such as the geographical setting of the colonial outpost at the head of Guanabara Bay, the early and lingering social stratification of its population, the economic reliance on the Brazilian colony by the mother country, and the abdication of the Portuguese seat by the Royal Court to Rio in 1807 and resulting spatial re-patterning of the then-capital city. Each played a large part in the unique development of the city. For example, the move of the Portuguese Crown from Lisbon to Rio, in response to the escalating Napoleonic War, instantly changed the demography of the city. Rio was flooded with large numbers of nobility, requiring rapidly built administrative office[47] and urban planning based on European models and architecture of the motherland. The city's organizational pattern was affected by the diversity of the population, which included African slaves and other "undesirables" who were left to inhabit peripheral areas in lowlands on the unprotected coast of the bay, a spatial expression of disparity that remained beyond the abolishment of slavery. Similarly, as the interior of the colony proved to be flush with natural resources, the state invested in Rio, the only legal port for international trade. The result was continuous reinvestment and improvements to the port, and a growing commercial center adjacent to it. All other urban infrastructure became centered around this area.

Because of these historic and physical conditions, Rio de Janeiro does not conform to the standard model of Latin American cities that suggests outer-edge locations for most slums.[48] In fact, the "city lacks sectorial or concentric zonal structure," related to and, in part, the cause of the fact that "favelas are not particularly or even significantly located on the periphery and…most favelas are relatively permanent features of the urban landscape.[49]" Recently, this landscape has shifted, massively expanding because of economic and political restructuring and the resulting urban migration. As population growth has outpaced Rio's ability to provide labor, housing or infrastructure in the formal sector, much of the expansion has turned to informality as a means to survive. Social, economic and spatial informality – favelas and submarket economies - thus pervades Rio's urban terrain, creating new geographies, relationships and hierarchies and supporting an

47 The Royal Court itself - 15,000 people - arrived in 1808 and duplicated the facilities it had at its disposal back in Lisbon, new pieces of the urban fabric that would be complemented by additional schools and cultural facilities.

48 Ribeiro and Lago, 1995 and Xavier and Magalhaes, 2003

49 Greg O'Hare and Machael Barke, "The Favela of Rio de Janeiro: A Temporal and Spatial Analysis," *GeoJournal* no 56 (2002): 239

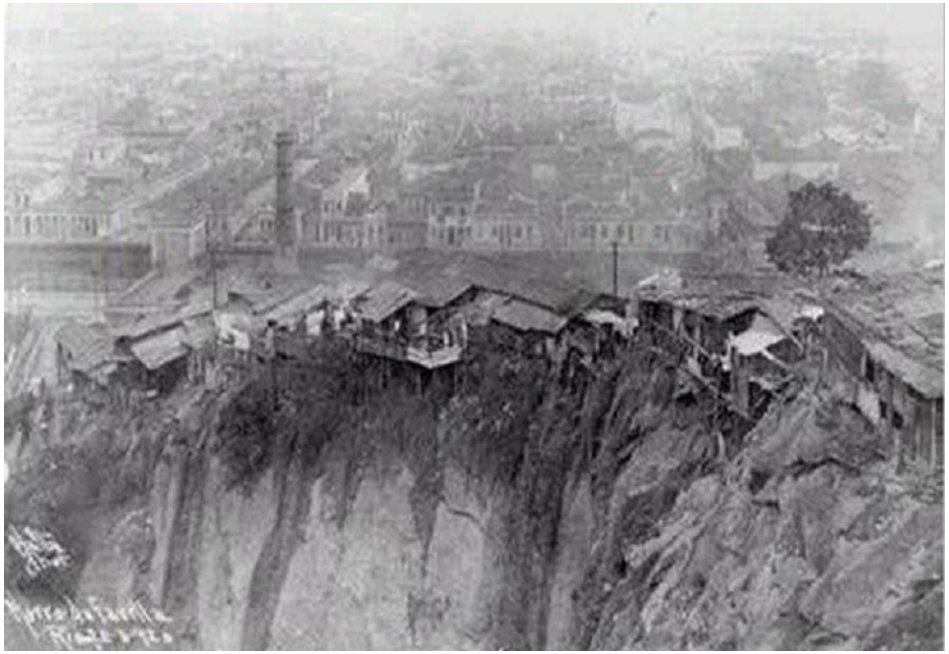


Image 3.6 An image of Morro de Providencia in the 1920s. Providencia is commonly held as the oldest favela in Rio de Janeiro. The settlement began as a shantytown for veterans returning from war in 1898. Image from the documentary *5X Pacificacao* (5x Peacemaking).

alternative interpretation of the contemporary city.

Nothing stimulated the growth of informal development to the extent that redevelopment did. The first illegal squatter settlements in Rio de Janeiro first appeared as early as 1881 on the steep hills close to downtown; military veterans who had returned to the city and were unable to find housing established the largest early favela –Morro de Providencia – in 1898 (image 3.6). But when the municipality embarked on large but unfocused modernization programs in the first half of the twentieth century, informality grew. A principal result of the direction taken by the city in redeveloping Rio was the displacement of many working- and lower-class citizens, whose neighborhoods were the victims of creative destruction undertaken for the sake of developing the central business district. This, in turn, led to an increase in the density of those living in coritcos (large houses subdivided into many rooms to accommodate many tenants) and tenements within the city center. Given this condition, the poorest families, who could not even afford the lowest rents, took to building their own homes en masse and the favelas flourished. In general terms, "the spatial distribution of Rio's squatter settlements, like those in other Latin American and Developing World Cities, reflect the interplay of social and economic forces.[50]" Economic and political

50 ibid

forces led to socio-spatial restructuring on the urban scale, domestic and international migration to the city, and changes in local employment systems. Changes in transportation systems, city planning, reconstruction and infrastructure development gave rise to related issues that are also important to consider.

The growth of favelas during Brazil's modernization period was notably higher than in the decades prior. It was this development in combination with the demographic changes seen throughout the first half of the twentieth century that caused urban informality to become a phenomenon thoroughly integrated into the fabric of the city. The campaigns for modernization were a major component in the general urban population growth in Rio de Janeiro. The broad trend in cities across the world was one that continues today: that of increasing urban migration. In Brazil, industrial development programs sponsored by the state exacerbated this condition. In Rio de Janeiro, this coincided with a rapid increase in both the number of disparate favelas and the population within them. Of course, the processes surrounding favela creation – as well as their spatial and social characters - are far more complex than simple emigration and immigration to the city.

By the 1930s, about the time of the city's first official urban plan, favela growth was well into its second phase. Around that time, a government-sponsored plan (Plan Agache) had noted a "semi nomadic population" living in the hills. The official recognition of informal settlement was corroborated by a 1933 housing survey that noted nearly 58,000 "rustic inhabitants" within the city's borders. At this stage in Rio's history, favela development was closely related to transportation and employment considerations, as proximity to commercial and industrial development provided potential for work. The global depression of the era lead to further domestic manufacturing, promoted as an economic stimulus and protected by trade tariffs while offering low-wage employment in large numbers. As urbanization increased, open space in the center of Rio was cut in half, lost to both sanctioned commercial growth and the creation of informal settlements.

Progress at this time was widespread. Urban infrastructure, such as the Central do Brasil railway line, expanded the reach of the city, allowing manufacturing and industrial firms to spread outwardly from the hills and the port onto the most suitable sites. Favelas and their informal economies followed onto less desirable land. This pattern of growth continued,

as informal settlements sprung up in proximity to other areas, in support of them, providing a labor market for manufacturing, industrial activities, and often times, middle-class residential districts. A product of these growth patterns was that informal settlements were placed on precarious ground – unsanctioned and illegal, the government was often called upon to raze the neighborhoods – yet they were undeniably significant to the economies of the adjacent districts. Thus, by the 1950s, as these factors expanded – social, economic and environmental conditions in the countryside continued to decline while the government advanced domestic industrial expansion via post-war policy – favelas became widespread, growing unencumbered by government policy, dispersed to the peripheries, but well established in the city's core as well.

Favelas were unsanctioned but important in supporting the formal city in ways such as their roles in the service industry and sub-market economies. But the distribution of informality throughout Rio de Janeiro belied the global image that the city tried so hard to portray. The venues for elite socializing – such as the beaches of the fashionable Zona Sul district – were juxtaposed by the contradicting architecture of the favelas nearby. Indeed, Zona Sul, despite being an affluent neighborhood, also boasted 43% of the total number of favelas at the time. By this era – a golden age for the city immediately prior to the loss of its title as the Brazilian capital – the lives of the affluent and the favelados (citizens of the informal settlements) were so intertwined that full erasure of the latter would be impossible:[51] Despite the spatial exclusion and specialization that existed, the social fabric was composed of greatly intersecting narratives of diverse natures. The social rhythms that created the city were articulating themselves in the spatial confrontation of pixilated and dispersed favela growth throughout the formal urban environment of Rio.

During the late 1970s and early 1980s, Brazil and other Latin American countries severely mismanaged their economies, leading to a global recession and considerable domestic economic problems, hyper-inflation of the Cruzeiro, and external debt crises. Interventions by the World Bank and the International Monetary Fund, influenced by the international liberalization plans promoted by Ronald Reagan, Margaret Thatcher and Helmut Kohl, aimed at relieving the situation through structural adjustments to the economy. Among these policies were lending conditions that stipulated currency "devaluation, privatization, the removal of import controls and food subsidies, enforced cost-recovery in health and educa-

51 Although full erasure was impossible, successful attempts to remove favelas were nonetheless made, mostly between the 1950s and 1970s. The most notable of these, undertaken with financing from groups in the United States, removed 80 squatter settlements between 1962 and 1974, eradicating 26,000 shacks and displacing 139,000 favelados to poorly constructed public housing nearly 50 kilometers from the city center. These programs were often supported by landowners in nearby districts who became increasingly interested in land development opportunities as real estate speculation began to take off. See O'Hare and Barke, 234.

Brazil

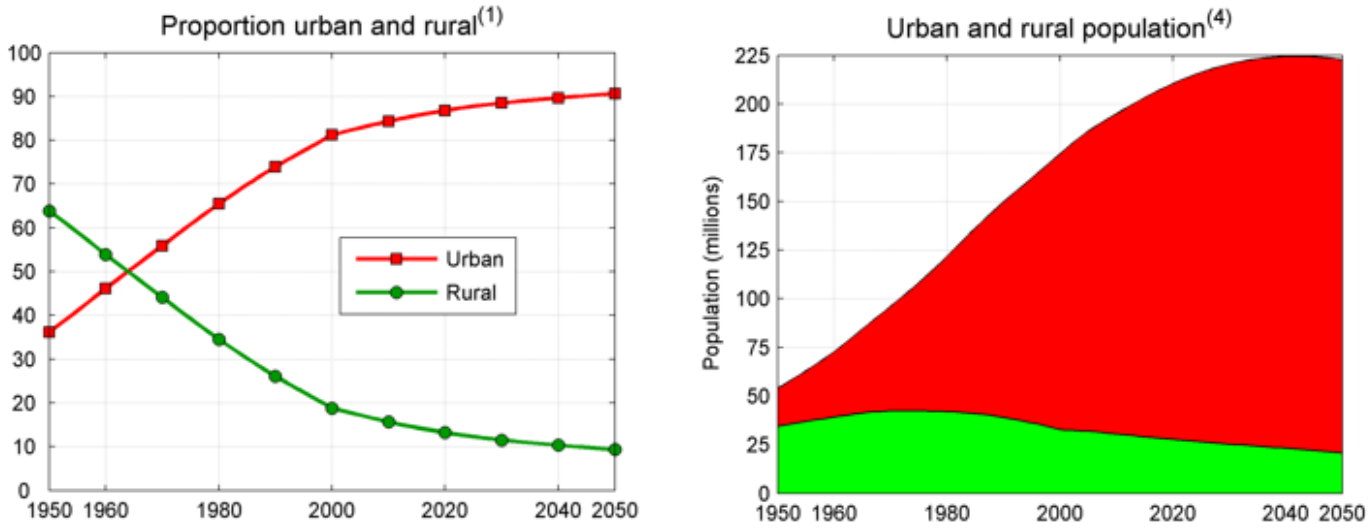


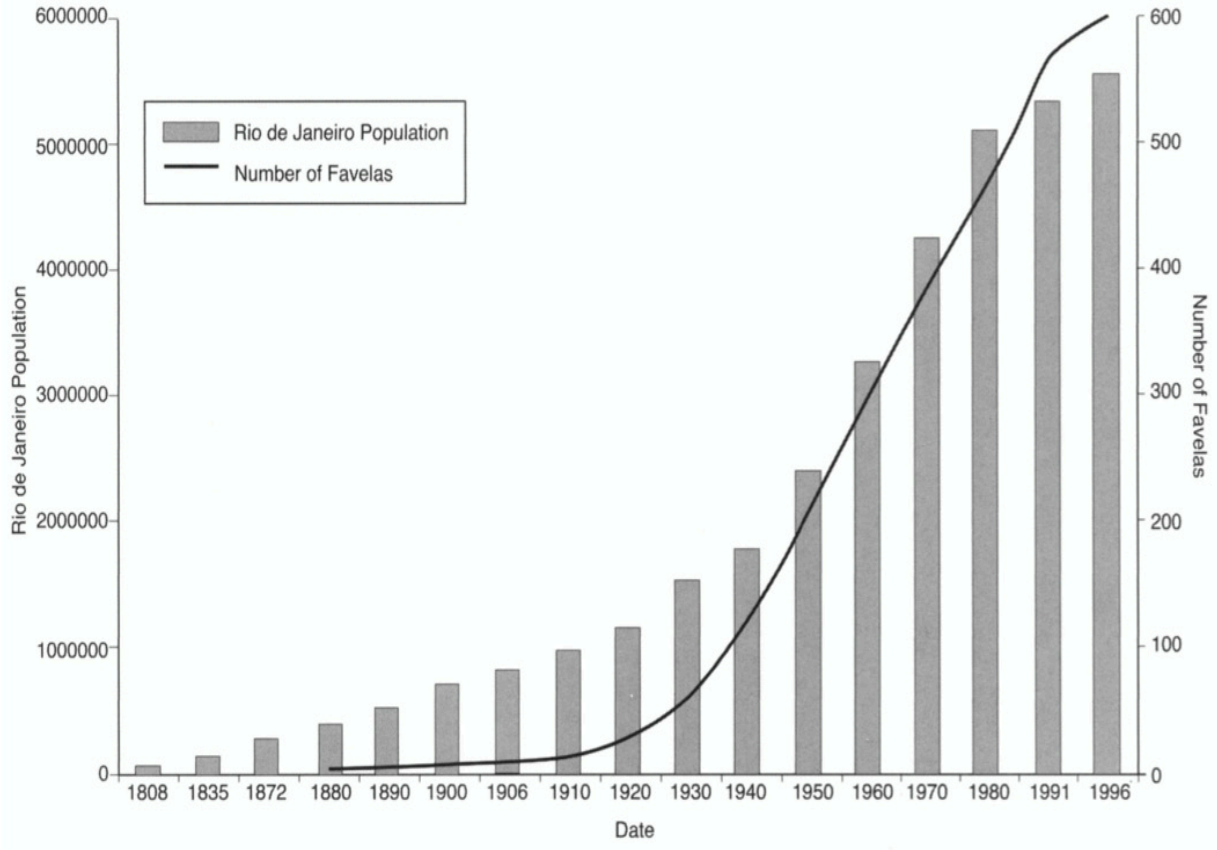
Image 3.7 Population data for Brazil from the past 60 years with projections to 2050 demonstrate the rapid urbanization of the country in recent decades, despite most cities inability to absorb increases economically, infrastructurally or socially. From *World Urbanization Prospects, the 2011 Revision* report by the United Nations Department of Economic and Social Affairs.

tion, and the ruthless downsizing of the public sector.[52]" Simultaneously, by promoting regressive taxation through fees for public services that disproportionately affected the poor, while sustaining military expenditure and existing income and real estate tax rates, the IMF trapped Rio, and many other Third World cities, in a protracted economic recession. Integration of rural areas into global commodities markets led to the dispossession of small holding farmers, now vulnerable to fluctuations of the global market, and the consolidation of rural land by multinational corporations. A massive emptying of rural areas and immigration to urban centers followed, and economic policy prevented infrastructure and public health from keeping pace with urban population growth (images 3.7-3.8). These changes caused the decline of living standards, a large increase in the numbers of urban poor, and the reduction of income amongst moderate and middle-income groups (thereby increasing competition in the low-rent markets). Cities in the global south, like Rio, were experiencing hyper-urbanization and a vicious trend of increasing immigration, decreasing formal employment opportunities, falling wages and falling state revenues.

These events led to immediate and dramatic increases in activity within informal sectors. Rio's squatter population

52 Davis, 153.

Image 3.8 Historic population of Rio de Janeiro & number of favelas over time. Graphic from O'Hare and Barke, 2004



increased 34% and became much more economically (and racially) diverse between 1980 and 1991. Powerful changes to Rio's urban terrain were at hand, largely due to these changes within informal settlements. For example, as government policy shifted from attitudes favoring demolition to movements for favela upgrading, middle class residents increasingly colonized the settlements. The recession also led middle and moderate-income residents to seek ways of lowering their living costs. These new favelados sought a more central location for residency in proximity to employment in a sprawling city where daily commutes can easily take three hours. As favelas have grown in acceptance, the structure of their population has become more akin to that of the city as a whole, and the communities themselves have become clearly hierarchical and stratified. This has led to efforts by residents to gain formal government recognition and push for in situ improvement programs. Yet upgrades have been met with criticism, which often views the strategies as an easy, low-cost means of addressing

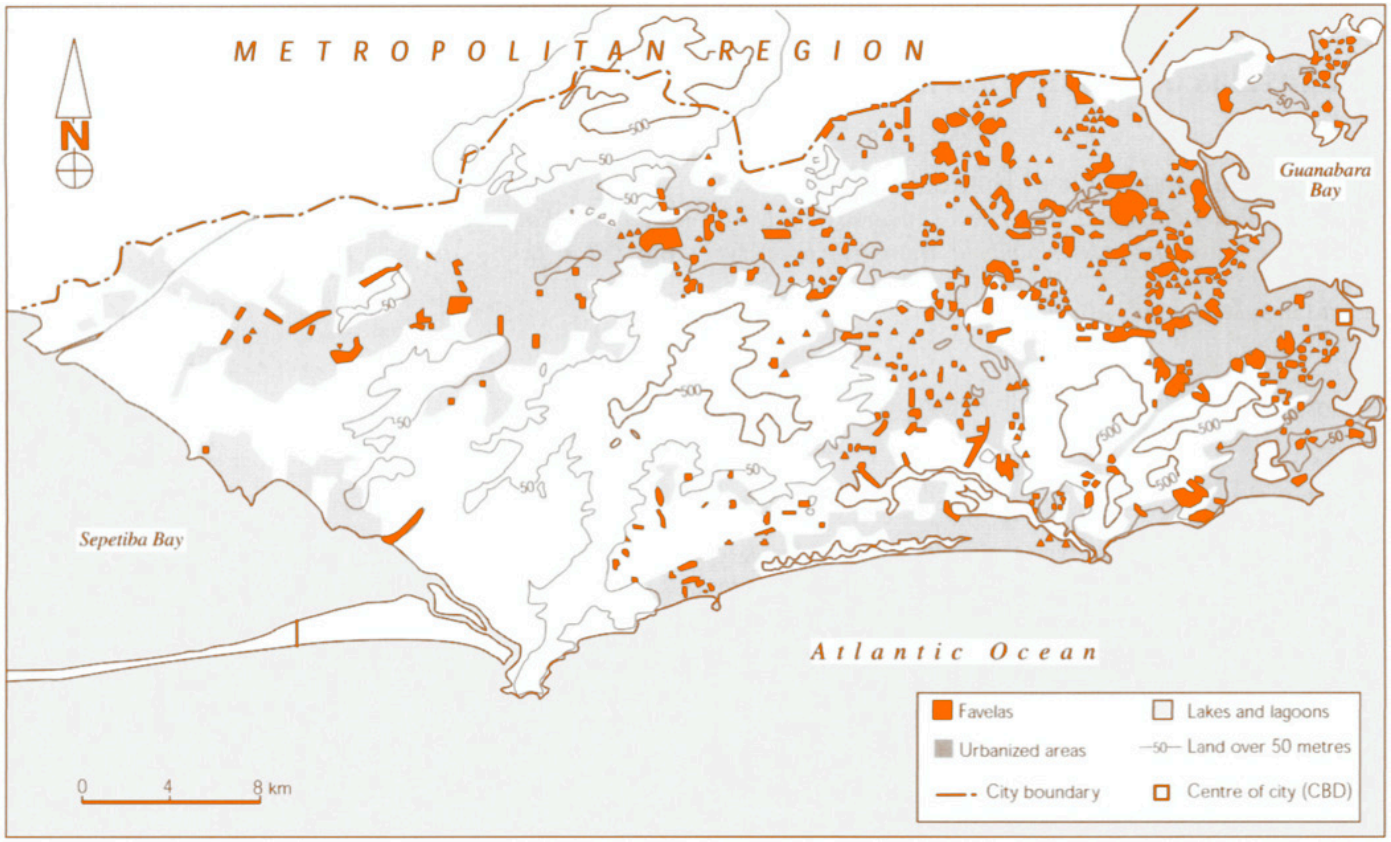


Image 3.9 Favela distribution throughout Rio de Janeiro. Grey areas indicate urbanized area; colored regions indicate presence of informal settlements. Image from O'Hare and Barke, 2004

the lack of affordable housing while allowing mass-poverty to continue.

The contemporary physical distribution of Rio de Janeiro's favelas is widespread and uneven throughout the city (image 3.9). Rio's organization has been divided into five principal Planning Zones (APs) that are then broken into separate administrative districts (RAs). Nearly one-half of the total number of disparate favela communities in the city are located within AP3 (270 out of 599 as of 2002), which also contains a correspondingly large portion of the favelado population (523,000 of nearly a million) and overall urban population of Rio (2.3 million out of roughly 5.5 million).[53] The AP3 planning zone is located in the northeast area of the city and contains concentrations of industrial, commercial and service activities, as well as high-end residential areas along the water. While this area contains the highest population densities of squatter settlements, there are also many favelas in the urban core downtown area (AP1) and in the high-income suburban

53 Figures from O'Hare and Barke.

residential area of AP2, both of which are located along the shore (images 3.9-3.10).

Both general urbanization and favela distribution, as explained earlier, are related to the complex environment of Rio that includes mountainous areas, hilly terrain, and interspersed areas of low-lying river plains and lagoons. These created a physical site that is dissimilar to traditional spatial models with large-scale peripheral development of informal settlements surrounding a central urban core. In fact, favela densities in outlying areas of the city are generally not that high. These densities and distributions correspond to the general patterns within Rio de Janeiro, which conform to a unique model in which informality is dispersed in various sized settlements throughout. This pattern of distribution is closely linked to the general figures and histories of formal growth in particular districts and the density of urbanization (except in cases of demolition). The city has grown and evolved through polynuclear and linear development. Multiple centers have facilitated radial growth from different cores at different times. This uneven development enabled overlapping patterns, creating a layered, fragmented city with pixilated zones of diverse character.

The spatial model of favela distribution that exists in Rio de Janeiro defies generalized ideas of center and periphery development because it grew in response to this unique set of conditions. For example, there is little residential space in the central business district of the city, and likewise, there are no favelas in the immediate proximity, contradicting common models of informal growth. The spatial characteristics of these favelas also vary widely – in some areas, such as Rocinha in Zona Sul (RA 27), informal development is concentrated into one large settlement, while in districts such as Complexo de Alemano (RA 29) a number of separate communities are spread throughout the area. On a larger scale, although the conditions in Rio conform to some paradigms – for example, that older settlements tend to be more centrally located and have a greater tendency towards self-improvement – they contrast with others, like those that expect favelas in the core to have lower quality of life indices and worse socio-economic conditions.[54]

Indeed, basic demographic and statistical analysis that examine individual favelas (and their context) suggest that "many of the relationships implicitly or explicitly suggested in the general models of Latin American urban structure do

54 See Ernest Griffin and Larry R Ford, "A Model of Latin American City Structure," *Geographical Review*, no 70 (1980) 397-422; Larry R Ford, "A New and Improved Model of Latin American City Structure," *Geographical Review*, no 86 (1996) 437-440; Larry R Ford, "Latin American City Models Revisited," *Geographical Review*, no 89, vol 1 (1999) 129-131; and Anthony Leeds, "The Significant Variables Determining the Character of Squatter Settlements," *America Latina*, vol 12, no 3 (1969): 44-86.

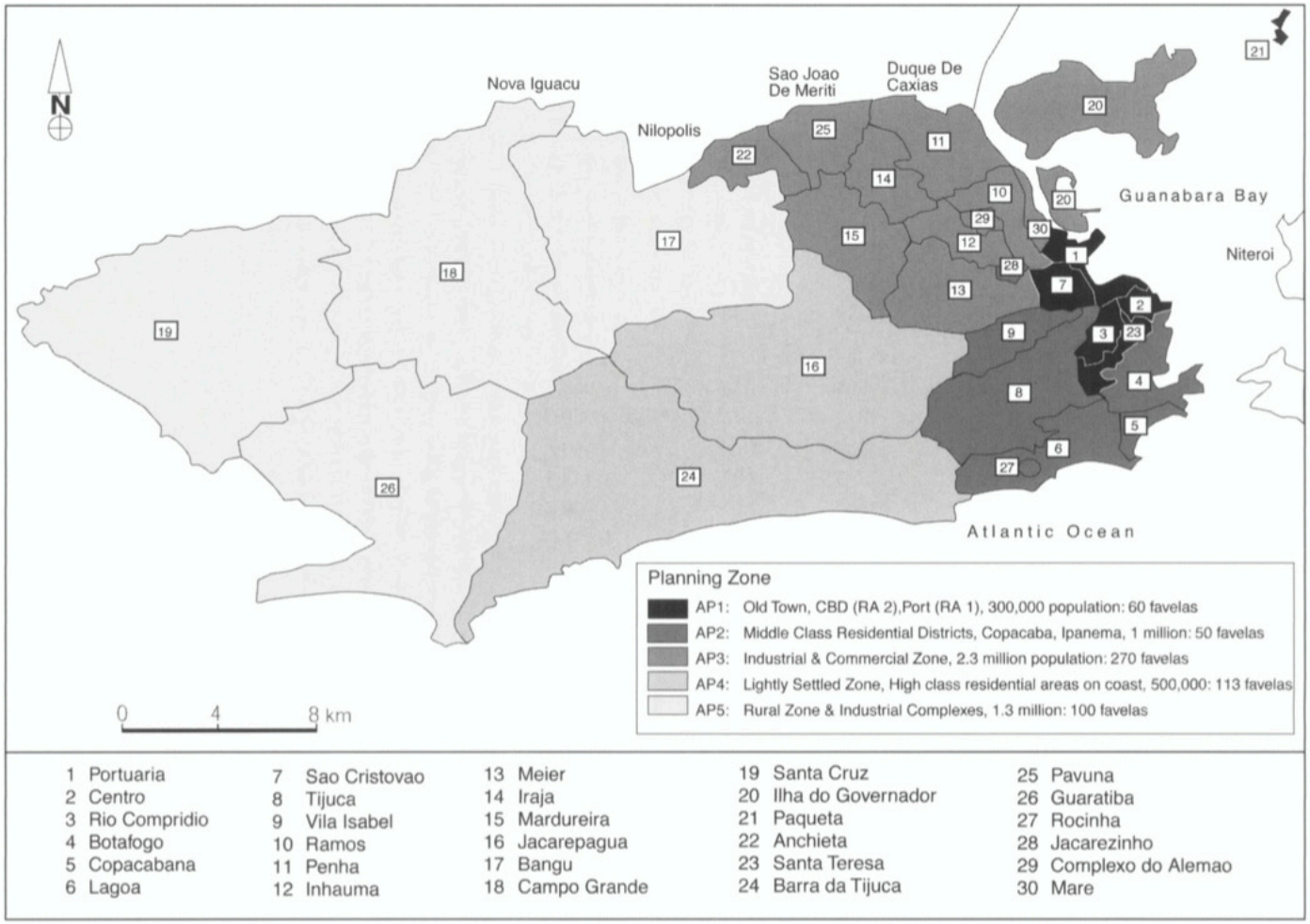


Image 3.10 The organization of Rio de Janeiro. The city is divided into 5 planning zones (AP1-AP5) comprised of a total of 30 districts. Image from O'Hare and Barke, 2004

not hold true[55]" in Rio. Specifically, many widely accepted paradigms suggest that informality is sequestered to the physical perimeter of the city proper and that its inhabitants are poor and marginalized or exploited. Rio de Janeiro, however, is characterized by a wide diversity of informal settlements, within which exist differing hierarchical social structures. For example, in Rio there appears to be significant correlation between population size or density and age of a favela. This reflects the changing nature of the growth within the city. Similarly, favela location has been historically related to commercial development – settlements sprung up in proximity to industrial and commercial growth – but informal development also favored land that had been deemed unsuitable for this type of zoning. Further, favelas are not located simply at the physical periphery of the city, instead they usually take up space described as internally peripheral: in marginal areas along infrastruc-

55 O'Hare and Barke, 229

Image 3.11 The new cable-car system in Rio connects favelas and the formal areas of the city via a six-station network. The infrastructure is government-sponored, an example of the strategies the formal sector is taking, the changing relationship between the two.

ture such as railways; in areas that are liable to flooding, such as the lagoon shorelines and river beds; and in the infamous hillsides that dot the landscape of the city (image 3.9).

The unique spatial distribution of informality throughout Rio de Janeiro has had enormous implications to the social fabric of the city. These consequences have been exacerbated by the continued evolution through globalization. Like previous historic influences that have created such a pixilated urban fabric, the forces of internal economic and social integration that characterize the evolution of a global city have transformed the physicality of Rio, layering further change onto the city. For example, the path that Rio de Janeiro has taken since the country gained independence – one that prioritized the cosmopolitan and worldly representations of the metropolis – has continued to influence the spatiality of the city. In striving for a particular image, and realizing the growth associated with an international market, development has created both modern images of luxury and wealth and the informality of Brazilian favelas. In their accumulation, the narratives that have affected change through the centuries of Rio's history have produced an idiosyncratic city in which the informal and formal confront one another. This spatial friction, however, is indicative of more general circumstances of dynamism and

Image 3.12 Natioanl Army members have been deployed to "pacify" the favelas, using broad sweeps to flush out gangs while patroling the streets, still full of residents. Image by Felipe Dana (www.felipedana.com.br)

fluidity within the urban condition and social fabric of the city. Understanding this alternative model can provide insight into the changing nature of what it truly means to be integrated into the international economy.

Indeed, the conditions in Rio may be unique, but the territorial fragmentation is merely a physical articulation of the intersecting forces that have existed throughout the city's entire historic narrative. As Rio has grown into its role as a modern city, the current circumstances have only further developed an urban terrain of complex and amorphous relationships. Some of these linkages exist between seemingly opposing binaries, creating interactions that can be considered simultaneously cooperative and antagonistic. This has manifested itself spatially and socially. For example, massive art installations have been installed in Morra de Providencia, an extremely violent favela, in an effort to call attention to the often-underlooked personal effects of crime, which has been addressed in very heavy-handed ways by the state. The changing nature of government response to informality indicates an evolving relationship between the formal and the formal. In-situ improvements and social programs demonstrate new strategies that governments undertake to address the informal communities. Political campaigning offer another insight: To shape the delivery of their message, candidates have moved towards using

Image 3.13 (l) Rocinha (circled) occupies the hills south of Rio de Janeiro's historic city center, overlooking the Atlantic Ocean. Image by Paulo César Fernandes Bastos (baixaki.com.br)

Image 3.14 Rocinha has benefitted from sanctioned infrastructural development, such as the Tunel Zuzu Angel (circled), a municipal highway that runs through the middle of the settlement, and the Estrada de Gavea, a paved road once meant to feed a planned - but failed - subdivision. Image by Rebecca Bachman of the Santa Barbara Independent (independent.com)

internet-based social platforms, such as Twitter, Facebook and Youtube, since these services are far more accessible to residents of slums than live-broadcast television, which airs conventional advertisement and election coverage. Simultaneously, the favelas are self-organizing, gaining political strength through community associations, mobilizing to improve their living conditions. The umbrella organization is funded by the Inter-American Development Bank, and is named the *Barrio-Favela Project* ("slum to neighborhood"). It emphasizes the importance of municipal cooperation in upgrading favelas, preventing future land invasions and integrating informal settlements into the urban fabric. Government-sponsored projects include recent infrastructural upgrades that legitimize infrastructural connections and new systems such as a six-station gondola network connecting favelas to formal parts of the city. The cable car system has turned a 90-minute journey into a sixteen minute ride (image 3.11); the city has come a long way since the slum clearance and creative destruction that marred its past.

In ways such as these, the social and spatial expressions of the relationship between the formal and informal is similar to the economic manifestations. In fact, these economic relationships that allow the city to advance. The economy of the formal sector - the city as a cosmopolitan world of wealth based on natural resources and beautiful beaches - rests

atop many favelados who work in formal sector jobs, make up the service and labor industries or who make a living through informal shadow economies. And of course the entire city shares the sand, the rich and the poor, favelados and formal - the beaches an icon of life in Rio, a part of the city's culture. Despite these conditions, criticism still surrounds the favelas and government aid for them, and land invasions still take place - the conversation that includes both the formal and the informal never ends. Large "pacification" campaigns that utilize the national Army and special Unidades de Polícia Pacificadora (translated as Pacification Police Units) are continuously deployed to favelas, reportedly to keep violence down; these often involve broad sweeps of the neighborhoods to flush out gangs (image 3.12). The massive construction projects like the gondola and large walls that prevent further invasions of unsuitable, natural land serve other objectives, such as public relations goals associated with the 2014 World Cup and the 2016 Olympics, both awarded to Rio de Janeiro - a point that is not lost to inhabitants of the slums. The formal structures and forces are inserting themselves into the informal realm: community organizations take their cue from the formal, and the city attempts to bring some familiar (though not necessarily appropriate) form of order through its response. At the same time, informality is seeping in inch by inch because the city needs it to support the formal economy. Thus, invasions still appear, jumping physical barriers and infiltrating spaces adjacent to formal ones, developing nearly as quickly.

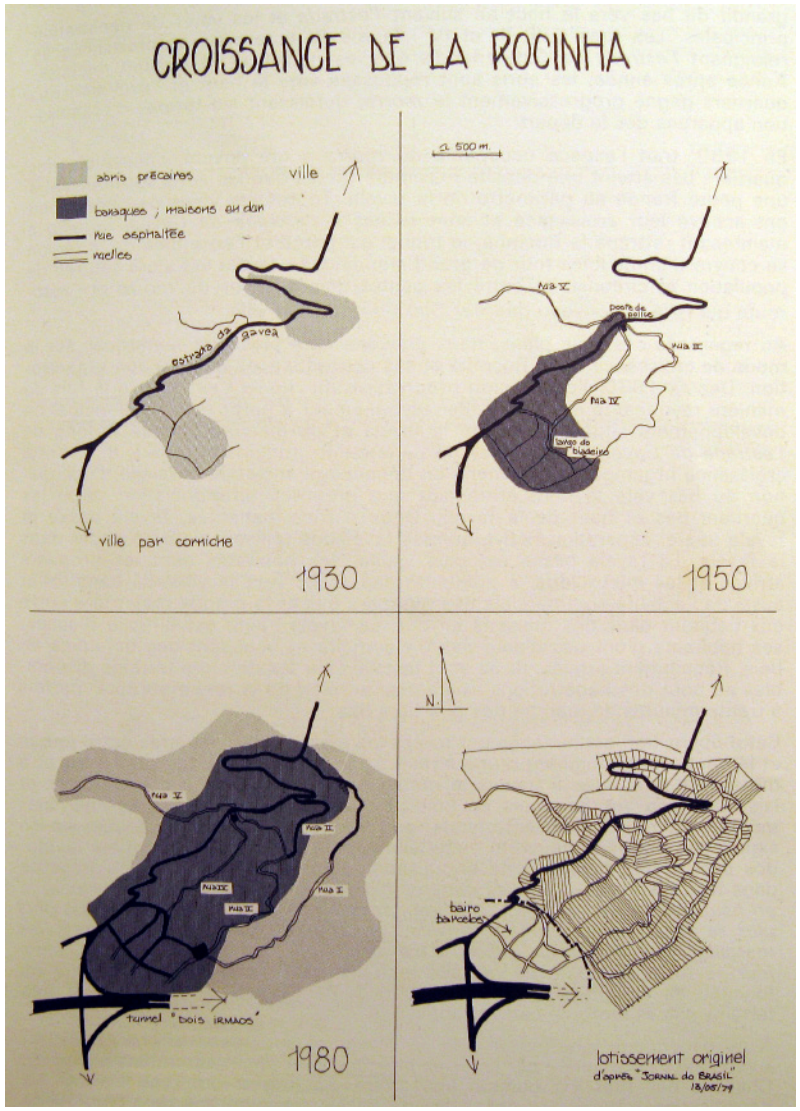


Image 3.15 Growth of Rocinha diagrams from *Architectes des favelas* by Didier Drummons via[FAVELissues] (favelissues.com)

A World of Informality: Understanding Rocinha through a Multi-Scalar Analysis

"Brazil has passed from Third World to Second. And the reality of Brazil is Rocinha. We are a community that serves as a model for other communities. We are the future. [55a]*"*

55a Neuwirth, *Shadow Cities: A Billion Squatters, A New Urban World.* (New York: Routledge, 2006) 65

Image 3.16 (l) As Rocinha has grown, it has not spread much horizontally, instead densifying through verticle growth. Image by Felipe Dana, Associated Press.

Developing between the glamorous beaches of Ipanema and Leblon, the affluent neighborhood of Gavea and the high-end residences of Barra da Tijuca, Rocinha is in the hills to the south of Rio's historic city center. The favela boasts enviable views of both the unspoiled forest in the preserved Parque Nacional de Tijuca and the water of the Atlantic Ocean (image 3.13). It is perhaps the most well known and the most urbanized of Rio's informal communities and offers a striking example of the relationship between the formal and informal that exists in the city. Although Rocinha is not the oldest squatter community in Rio, it has benefitted from key advantages indirectly established by the city and the Brazilian state, especially while Rio was the capital. For example, the settlement has profited from a municipal highway (Tunel Zuzu Angel) that divides the site and other infrastructure such as the Estrada de Gavea that was put in place for a failed subdivision (image 3.14). This has allowed for car and truck access, as well as public transportation via two available city bus lines. Together, these two roads have facilitated wide-reaching growth and sprawl development while giving the community better access to more jobs. Because of its proximity to the affluent communities and commercial areas nearby, Rocinha has also

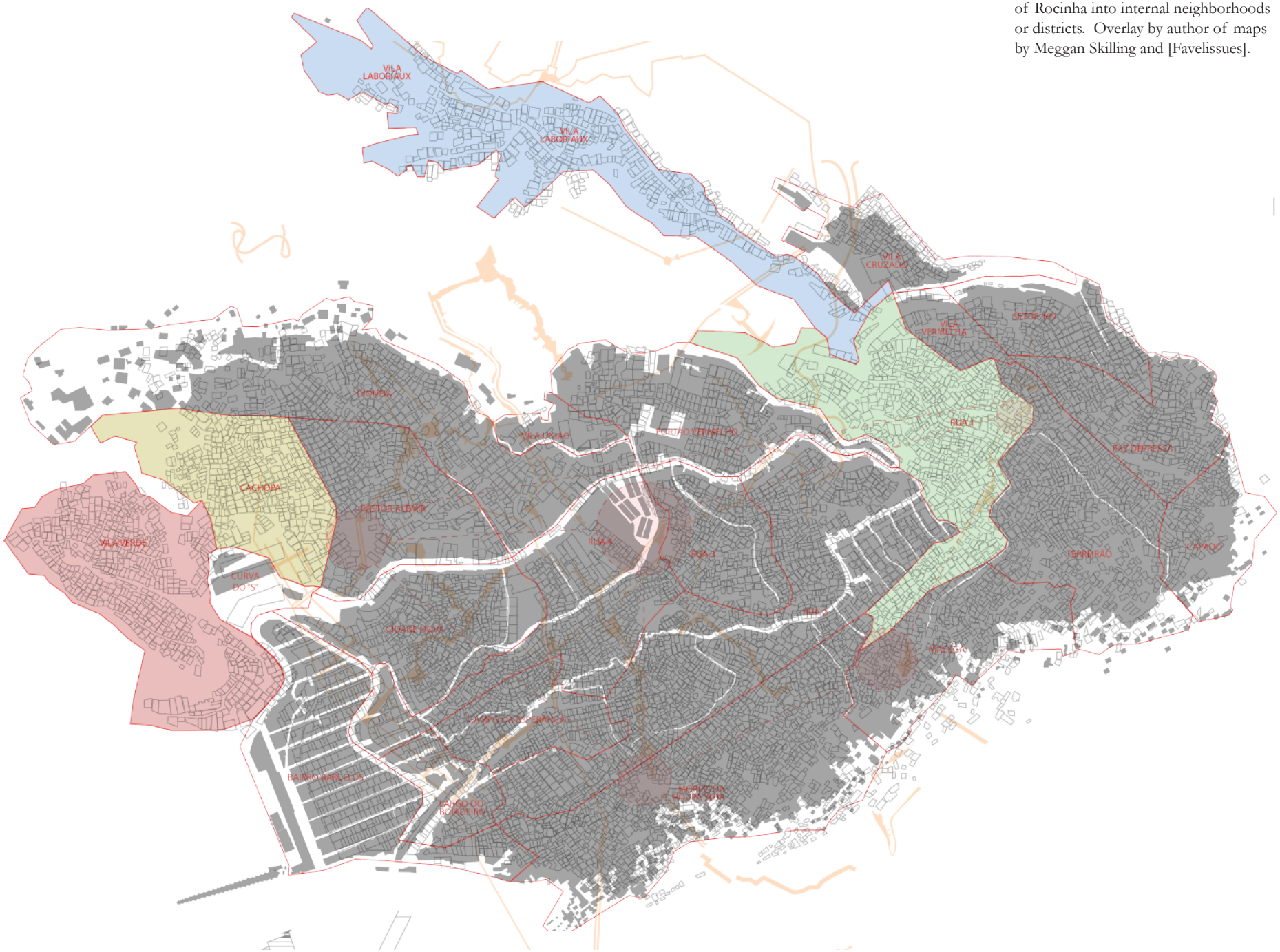


Image 3.17 Map showing further division of Rocinha into internal neighborhoods or districts. Overlay by author of maps by Meggan Skilling and [Favelissues].

undergone more urban improvements and received more attention from the media. These factors have propelled its social growth. Rocinha has the highest population amongst the city's favelas, with estimates of up to 250,000 residents (though these approximations vary widely), a strong real estate market defined by stratified property price points and exchange, disparate neighborhoods of its own, and mainstream commercial outlets and stores. Rocinha represents an exceptional case of linkage and exchange with the formal parts of Rio de Janeiro – those that anchor the city's status as a global, modern metropolis. Analysis of the community provides insight into the changing relationships in the city, offering an understanding of the range of spatial and social relationships that develop in the globalized city, if unintentionally.

Like all of Rio de Janeiro's favelas, Rocinha is an illegal community of unsanctioned, self-built development, created through the invasion of open space in the hills, over the span of decades. Prior to the establishment of the community, the hills were most likely farmland (*roca* means "farm," in Portuguese; *rocinha* is "little farm") too steep to develop for commercial or industrial purposes. Once merely a trading post for the farmers, a community was formed in 1927 consisting mostly of workers from factories in nearby Gavea. Early settlers followed particular codes, such as the unwritten rule of building nothing permanent. Thus, by 1933, little shacks of wood and mud provided housing for 367 mostly male migrant workers, and the entire settlement measured less than 3000 square feet. Despite rising tensions between the nascent favela and the upscale community of Gavea, in 1938 the municipality paved the main street of the formal neighborhood, increasing accessibility to the informal one. This public amenity led to a population increase in Rocinha, the establishment of its first church, and the development of a community founded on the relationships between favelados, politicians, and influential residents of the Gavea, and on "an informal system of arbitrage and cooperation.[56]"

By 1960, the favela's population numbered nearly 15,000, and the number of dwellings reached over three thousand. Facing the strain on natural resources and infrastructure caused by the population increase, and the development of corruption in the social and political hierarchies (for example, basic living resources such as water were being controlled by a small group), community associations started to internally organize residents to take control of Rocinha. The establishment of these bodies created more equitable and manageable conditions within the favela. Perhaps more importantly, it galvanized

56 Daniela Fabricius, *100%* Favela (Barcelona: Actar) 2007: 4

Image 3.18 Residences in the building are built a floor at a time. The real estate market has had to remain flexible, and most floors dwellings are constructed with the understanding that successive floors can be added. Rebar is left exposed on the highest floor for future building. Image by Adayjoy Adayjoy via Google Picasa.

Image 3.19 Entry into Rocinha from the city proper is usually taken through the Passarella, an agora selling all sorts of wares, and the first taste of the pace and atmosphere in the favela. The pedestrian bridge connecting the formal and informal parts of the city was sanctioned by the government and completed in 2009. It was designed by Oscar Niemeyer. Image by Yann Arthus-Bertrand (yannartusbertrand2.org)

the community, enabling them to resist the slum clearance that caused the eradication of other informal settlements in the 1970s and 1980s. Although some evictions occurred, Rocinha was able to weather the politics of total removal. By the end of the movement, it was considered the largest favela in all of Latin America, occupying 4.9 million square feet, or nearly half a square kilometer. At the same time favela clearance subsided, residents began building with more permanent materials, such as concrete masonry units or the red brick associated with images of the favelas.

Since the 1990s, the number of dwellings has doubled from 12,000 units to over 20,000, mostly through vertical growth and increased density (image 3.15 and 3.16). Although horizontal sprawl still occurs – much of it into environmentally protected areas and unsuccessfully contained through the construction of concrete barriers and walls – the spatial typology and real estate market within Rocinha encourages upward development. For example, the increased density and population has facilitated organizational patterning in the favela similar to that of Rio at large: the settlement has divided into neighborhoods itself, each with its own character (images 3.17). Similarly, floors of residential buildings are built sequentially and are unplanned. The roofs of buildings are characterized by rusting rebar sprouting from the perimeter, allowing for ad-

57 This is a common strategy in several informal settlements in Latin America

Image 3.20 illustrates the extent to which Rocinha, like many other informal settlements, has infiltrated the formal, consuming and commendeering it through actions such as the self-built utility networks that pirate services and connect to municipal services, such as water, electricity and infrastructure.

ditional growth in the future (image 3.18).[57] The entire real estate market within the favela revolves around a tricky system of bartering in which "ownership," and "possession" are two different things, since hardly any of the land is legally owned. Citizens can "own" their residence, and sell the rights to the roof and air above it, allowing others to own the next successive floors.

Today, Rocinha straddles two worlds; it is firmly planted in the reality of the favela, but with increasing connection to the formal city through social, economic and spatial relationships. For example, connecting Rocinha and the sanctioned, middle-class neighborhood of Ganea, is the Passarella, an arcade of kiosks along the highway. It is the first taste of the cadence within the favela: an agora of street vendors selling all sorts of wares to customers from both neighborhoods, and tourists, thereby connecting it economically to the greater city (image 3.19). Beyond the arcades and into the heart of Rocinha, the patterns of life are even more arresting, more chaotic, and more dynamic. The social and spatial rhythms that hold the favela together are more striking when compared to the sterility of the adjacent formal neighborhood, the planned community and the upscale fashion malls where "everyone moves at a leisurely clip and exhibits an identical lack of pas-

sion:"

> *"Hundreds of people moved in all directions. Cars, trucks, and buses massed at each curve. Dozens of mototaxistas (guys with motorcycles who ferry people up and down the favela for a modest price) zipped through the small spaces between other vehicles and the people, coming agonizing close to smashing arms, legs, torsos…the squatter community was busier than the legal community right next to it. It had more life."*[58]

The social capital within the community is undeniable – it reflects in everything from the relationships between citizens (who seem to have established a comprehensive network in which everybody knows everybody else) to the physical character of the site. For example, the organic nature of the architecture, the winding *becos* that were once pathways of dirt cut through the hillside and became the narrow alleys of steep concrete steps are physical expressions of the social networks within the favela. The proximity and density also serve to reinforce the community. Similarly, the details of white tubing that run along pathways, or sprouting rebar at roof tops, speak to the potentials, opportunities and future of the neighborhood. And walls of poorly assembled red brick contrasting finished, modern interiors within some units, the juxtaposition of the ocean views seen past the roof tops of the uneven, patterns of the buildings support an interpretation of the favela not a slum, but rather a community that is linked to the formal urban terrain like few before it (image 3.20).

In understanding Rocinha at the urban scale, the informal settlement illustrates the shifting relationships within the new globalized city. The favela does, indeed, have many, changing connections to the city around it. This is seen through several examples. For one, the sheer size of both land and population has changed the relationship between Rocinha and the city of Rio. Although the municipal government does not legally recognize the neighborhood, per se, it has established the area as a legal district of the city, maintaining an office within the neighborhood that is well-staffed. Similarly, the economic connections established decades ago by employment in factory work have shifted to the service industry. In this sense, Rocinha favelados are essential supporters of the globalized lifestyle that is advanced by the image of the cosmopoli-

58 Neuwirth, 32

59 Today there exists an interesting contrast: While nearly 25,000 households have signed up for legally-provided electricity, the street lamps still have tangles of wires through which power was once siphoned

60 At one point, developers divided land into lots for homes and paved more roads and infrastructure nearby, but failed to develop mass-produced single-family houses when the banking industry collapsed. The road remained, Estrade de Gavea, greatly helping the favela develop and spread.

THE
CrossFit JOURNAL

Favela Fitness

Residents in Rio de Janeiro's Rocinha favela use CrossFit to rise above poverty and violence.

By Chris Clark CrossFit Rocinha **April 2010**

All photos courtesy of Chris Clark/Rocinha CrossFit

I woke up to the heavy thumping of a military helicopter circling, diving and banking hard to avoid the gunfire from the ground. I ran to my window, small and square with bars, and I could see it all when I was standing on my toes.

1 *of* 5

Image 3.21 Businesses and commerce have turned to favelas such as Rocinha, viewing them as largely untapped markets. The new fitness trend - CrossFit - has come to Rocinha; participants work out on the famous beaches of Ipanema. In a culture where the beach is very important, firms such as this are facilitating the conversation between the formal and informal. Image by Chris Clark and Rocinha CrossFit (rocinhacrossfit.com)

tan. These citizens provide unseen service workers who are nonetheless a part of the representation expressed by the skylines and lifestyles of Ipanema and Ganea. These social overlaps, embodied by the shared public space at the beach (an integral part of Rio culture), are evidence of the dynamic exchange that provides an alternate way to understand the globalized city.

Aside from the political and economic linkages that some citizens are a part of, increasing commercial entities, such as the state run bank Caixa Economica, Depla (a film developing company) and McDonald's are establishing themselves within the neighborhood. There is even a CrossFit franchise located in the favela (image 3.21). These firms complement favela-born restaurants and retail stores that sell everything from groceries and electronics to pharmaceuticals, allowing the community to be self-contained. Because they can find everything within the borders of the favela, residents never have to leave. Similarly, utilities within Rocinha have become increasingly improved through private corporations. For example, the power company, sensing the need to regulate the area, which had been illegally siphoning off electricity for years, created a non-profit to provide legal electricity to residents who agreed to install a meter.[59] Likewise, Rocinha has been wired to receive satellite television through a provider.

The formalization of various services within Rocinha, like the electricity and satellite television and the availability of standard banking facilities, testifies to the growing integration of the favela into the formal city. This integration is also seen in the development of Rocinha's infrastructure, which had originally been created to link the factory suburb of Ganea to the harbor and the downtown core. This produced

fertile ground with access to the highway for Rocinha to grow. Combined with the failed pursuit of Western subdivision development[60] the horizontal spread of the community accelerated because of the provided access and maintenance.

The convenience created by the roads meant everything was closer at hand, leading to population growth, vertical expansion by way of availability of building material made possible because of global commercial integration, and population explosion. Of course the same reasons that the infrastructure was built – proximity and connectivity – were the grounding of the favela. Rocinha grew and flourished initially because nearby employment opportunities tied to the formal city were available for settlers, and these were jobs that would never afford most the chance to live in the very same upscale neighborhoods in which they worked. These residents created a shadow city within the upscale neighborhoods: an intrinsic produce of the economic and social fabrics, but one that was not totally integrated. This proximity and access added to the complexity of the community by expanding and increasing the economy through commerce imported from the formal city and beyond. Thus, the appliance outlets, national banks, large-name drug stores and franchises within the favela are more than symbols of the settlement's self-proclaimed successes. They represent very tangible (and human scaled) instances of how Rio's formal and informal sectors collide. This evolution is one that has, in recent decades, led to signs of the formal *within* the informal; the creation of new markets for the global in the favela. In fact, the two worlds self-perpetuate - the organization of planned developments has enabled and required informal geographies such as settlements and sub-market economies to support them, while the growth of favelas has al-

Image 3.22 In the alleged chaos of the favela there does exist clear hierarchy and ledgibility of space. Rocinha, like many other informal settlements, has a fractal-like, organic growth pattern, but dwellings are equitable, circulation is hierarchical, and public spaces (shaded) that evoke those in sanctioned planning act to enable community gathering. Map by Jan Kudlicka via arch daily (archdaily.com)

lowed formal economies and organizational patterning to reshape the settlements.

Indeed, the relationship between Rocinha and the formal sectors of Rio has had spatial and social implications that go beyond the economic intertwining of the two. The history of development of the city as a whole and the favela in particular are closely related. For example, the land grab and speculation that ensued during Rio's rapid urbanization in the 1970s and 1980s laid the foundation for one of the key traits of the favela: The community's location on the hills is directly related to this area's unsuitability for traditional construction. The fractured growth patterns of the development are chaotic in appearance. Yet this spatial organization and hierarchy is nonetheless meaningful and legible and is a product of the same processes that grew the formal parts of the city. As such, particulars of the favela are interesting in that they reflect different roots of the city and society. The language of the spaces recombine some of the same aspects that are valued in the formal city with "planning" that is led by a self-built, grassroots system, explaining its inherent nature as a human-scaled effort. For example, while there has been no structured means of subdividing land space, there is an equitable character to the sizing of the buildings. There is also a notable hierarchy of circulation within the community based on the roads that were legally put down and public spaces around which structures are built such as plazas that are reminiscent of those programmed into sanctioned development in Rio de Janeiro (image 3.22). While the disparate homes and storefronts are able to embody the individual far more than contemporary dwellings of the formal, representing a break from the championed image of the globalized city, the planametric layout of Rocinha illustrates a continuation of systemic equitability. Also, the distribution of public space draws on some of the same ideals as those that shape Rio's own planning. That is, the spatial organization of the favela recalls that of the formal city around it. Rocinha, like Rio, is divided into neighborhoods, composed of block units, which then organize themselves around open squares and plazas, albeit at different figure-ground ratios.

The social capital within the dense, hectic fabric of Rocinha is rich, spilling out at the seams and borders of the favela and reaching out beyond.[61] The physical fabric of the settlement contains many human-scaled symbols of what it is – a product of the formal, a challenge to it, a complement to it, its partner in the creation of the new model of the globalized city. Thus, the exposed white pipes that crawl along the steep becos and the alleys themselves; the nests of wires that haunt

61 For example, the culture of mixing Samba, hip-hop and dance music has come to characterize Rio de Janeiro as a whole, but the mix originated, was experimented with, and tested on the population within Rocinha at weekly free *baile funk*, an all-night dance party featuring live DJs in the Valão neighborhood of Rocinha.

Image 3.23 Socio-spatial fluctuations within favelas such as Rocinha are products of the same conversation between the formal and informal that enables ad-hoc settlements to infiltrate and invade formal cities. Rocinha, like many other favelas, has slowly been subject to gentrification - the organization of unsanctioned development by very formal structures. Rua 4 (l) is a housing neighborhood that has been remodeled and added onto by municipally-sponsored programs such as the Programa de Aceleração do Crescimento (PAC - Accelerated Growth Program, which is also responisible for the pedestrian bridge to the Passerella), that have pursued in-situ solutions to favela safety issues. Image by Mundo Real (1mundoreal.com)

the tops of streetlights (relics of the era during which power was stolen and reminders of the communities unsanctioned beginnings); the degradation of construction quality in both dwellings and roads; the unfinished walls and rusty rebar that stop suddenly against the backdrop of the ocean and the sky. The character of the favela is a product of the spatial priorities that Rio pursued, drawing on some of the same inspirations, adapting to particular circumstances of site and economy, integrating into the formal fabric, being broken up by it. Rocinha has become so much a product of the formal city that the continued strengthening of the linkages between the two can be summarized by a new term, coined to reflect the spatial and social changes of the community: *asfaltizacao*. The diverse attitudes surrounding asphaltization aside, these changes are a product of the undeniable forces created by Rio's historic and contemporary march towards globalization (image 3.23).

The urban planning strategies that the state and city advanced, the economic policies that pushed the country from a rural to an urban-based society, the influx of transnational corporations with the liberalization of various markets – these factors each directly relate to the creation and development of the favelas such as Rocinha. The spatial growth that accompanied the benefits of globalization and urbanization produced the informal settlement, situating it *within* and reconnecting

it to the formal, rewiring the relationships between the two. Favelas have, indeed, existed in Rio since the late nineteenth century, but it was not until the state rapidly urbanized that informality and formality were able to intertwine. As such, this particular favela, singularly entangled with the formal city, perhaps represents the future of the urban condition. As new paradigms of the formal and informal reveal themselves, notions of the globalized city are redefined. Rather than an urban aberration or a temporary settlement of impoverished nomads, favelas like Rocinha, in their changing internal organizations and external social and spatial relationships, are an integral part of their "host" city's character. Based upon this case study, the globalized city can be considered as one of contrasts, oppositions and dynamic compromise and confrontation.

Chapter 4

Case Study Caracas | Confronting Disparity

Introduction

A new territorial pattern can be said to have emerged in the capitalist system beginning in the 1970s, one in which the cities have ceased to be the centers of expression of the respective national states' power in the world and turned into centers of the new global economy.[62]

The history of urban development in Venezuela, and specifically the growth of informality in Caracas, is undeniably linked to an economic narrative and the shifting policies of an unstable state marred by poor administration and corruption. That this mix of politics and economics has shaped the urban form is undeniable – this much is true in nearly any context. Yet the Caracas case is important to note because the rapid urbanization that took place in the city is due largely to policy and economics surrounding the energy industry. Indeed, national policy facilitated large influxes into the city by advancing economic strategies of "sowing oil," or heavily investing revenue from the booming petroleum sector into urban centers, ultimately becoming massively overleveraged. That state had become beholden to the swings in international markets, far more than those with diversified or stabler exports. Caracas is emblematic of a new model of the city made up of vastly different socio-spatial elements all competing for a larger stake in the urban terrain. Its quality as a layering of opposing histories and confronting life experiences has created a unique territorial pattern in which territorial segregation juxtaposes wealth born from oil and abject poverty that has risen as a consequence. The city's character is a symbol of the global economy, defined by increasing speeds of exchange, massive urban immigration, but also a friction between divergent realities, stark inequalities, and the formal and informal, the metropolitan and the barrio. Indeed, the rapid growth leading up to the 1960s, and the "growth disaster" that followed and remained until 1997 – protracted in part by an ambitious

62 Lacabana, Miguel and Cecilia Cariola, "The Processes Underlying Caracas as a Globalizing City," in *Relocating Global Cities: From the Center to the Margains*, eds M. Mark Amen, Kevin Archer & M. Martin Bosman. (Lanham: Rowman & Littlefield Publishers, 2006), 179.

Images 4.1 An iconic representation of the barrios in Caracas shows the nature of the self-built, ad-hoc settlements, and fractal growth patterns. The city is characterized by seemingly incongruous parts intricately interwoven in odd juxtaposition. Image from Caracas 1010A blog (caracas1010a.blogspot.com)

liberalization program in 1989 – all contributed to rapid urbanization in cities such as Caracas.

The second half of the twentieth century saw major changes in Venezuela's economic, political and urban character. The physical development at both the country and city levels would only foreshadow what was to come. In some ways, the evolution from a struggling agriculture-based economy to one built on a reliable source of oil for international export would be dwarfed by the social and spatial metamorphoses caused by the country's move to a predominantly urban state. As Caracas and Venezuela entered the processes that would lead them toward urbanization, little thought was given to potential difficulties. These problems would occur at multiple scales. Most apparent perhaps, Venezuela never addressed the conflicts caused by its attempts at global integration through activities that have altered its physical fabric. These included the misalignment of contemporary spatial patterns with its historic character - and the role of the individual within it) and the rampant inequality that has facilitated an economy of poverty.

These conflicting visions of the city are the product of actions taken in Venezuela's first 350 years of existence,

which include a willingness to import urban tenants and the state's reterritorialization and management policy to facilitate specific, urban agendas.[63] Such discordant influences are readily apparent in the form the capital city has taken in the past few decades. The spatial character of Caracas has changed, becoming both sprawling and fragmented, a pixilated landscape made up of the modern skyscrapers expected in a contemporary city, and swaths of informal settlements - commonly known in Venezuela as *barrios* -in odd juxtaposition (image 4.1).

The complexity seen in Caracas, like that of Rio de Janeiro, was born from divergent and seemingly contradictory source that have created a socio-spatial urban terrain unlike the standard model of cities, which "divides the urban terrain into two mutually exclusive socioterritorial segments.[64]" Rather than a strong spatial opposition that relegates most barrios to the outer areas of the city, Caracas' downtown and commercial cores have been invaded by these settlements. The urban terrain of the city has become pixilated as both sanctioned development and informal geographies - both economic and spatial - create friction against one another, conversing and negotiating for their place in the city. Indeed, Caracas is characterized by the coexistence of several diverse segments within the city, all interacting, supporting and confronting each other to produce a dynamic fabric of conflict that constantly flexes, reshapes, and redefines itself. In this regard, Caracas might be a new type of city, one in which differences and oppositions interplay, one that requires an alternative way of analyzing it. Emerging from a set of seemingly incongruous historic layers and socio-spatial development, the city has grown into an amorphous urban terrain that offers a representation of the city authentic in its inclusivity; a product of a diversity of parts that jockey for position, overlapping and responding to each other to shape the city's evolution.

Still reeling from drastic policy changes enacted in the first half of the twentieth century, Venezuela would embark on its greatest societal transformation yet when it found the means to enter the international arena as an economic player. Early twentieth-century policies shaping the petroleum-based economy focused on the goals of domestic revolution: the state sought to "sow oil" into the urban centers of Venezuela following the discovery of the resource in the 1920s. This would lead the city of Caracas towards rapid growth, pulling citizens into the urban center as the state sought to develop it as a modern city. The process of transforming the state from a rural population to an urban one had begun: As Venezuela's

63 For a more complete examination of the historic narrative of the state of Venezuela that considers the emergence of the state from colonial rule through its contemporary role within the international economy and global culture, see Lorenzo Gonzales Casas, "Caracas: Territory, Architecture and Urban Space." In *Planning Latin America's Capital Cities: 1850-1950,* edited by Arturo Almandoz, 214-242. New York: Routledge, 2002.

64 ibid, 192-193, see also Saskia Sassen, *The Global City: New York, London, Tokyo*, (Princeton: Princeton University Press) 2001.

Images 4.2-4.3 Caracas' downtown skyline represents its continued goal of modernization, globalization and itnernational integrations. But the forces that have facilitated this growth have led to over-urbanization and the growth of formal development has been accompanied by increased informality. Images by Yann Arthus-Bertrand (r; yannarthusbertrand2.org) and Pietro Paolini (terraproject.net)

increased international value grew from its dependability as a provider of energy, relative poverty throughout the state was replaced by economic stability. Investing in oil facilitated a rapid change from an agricultural-based economy to an industrial and then urban one. This shift was encouraged by urban immigration from two sides - citizens who resettled from rural areas were joined by immigrants who had travelled to Venezuela following World War II. The city was pushed beyond capacity, and informality – which had existed in Caracas since early in the twentieth century - flourished.

This chapter will consider the situation of Caracas and the economic and social forces within Venezuela that produced it, making use of the analytical frameworks established through a close reading of Deleuze and Guattari. Following a critical examination of the history that shaped the city and the state in the post-war era, it shall reflect on the forces that shaped the physical fabric of Caracas to produce a layered city with very different economic and social dimensions. To accomplish this, the study of Caracas shall be augmented by a discussion of El Torre de David, a specific barrio neighborhood that is symbolic of the multiplicity within the globalized city. Engaging in both temporal and spatial analysis, this chapter addresses ad-hoc settlements and sub-market economies in the context of Caracas. In doing so, it advances an understanding that

differs from conventional readings of informality as anomalous or invalid in the context of the otherwise homogenized image of the global city. This interpretation considers the urban socio-spatial terrains through the dynamism of the ongoing confrontation between various sectors (image 4.2 and 4.3).

Formal/Informal: The Forces Behind Contemporary Urbanization in Caracas

> *Caracas has overflowed its urban boundaries and expanded toward its periphery, while new dynamics and contents of urban segregation linked to the restructuring processes occurring in the framework of globalization are superimposed on the historical processes under which Caracas came into being…giving rise to increasing socioterritorial inequality and a growing metropolitan fragmentation.*[65]

Venezuela's tendency to employ the most modern infrastructural and architectural designs as solutions to its problems is a habit that was formed early in the twentieth century and bankrolled by an expanded value in a global economy hungry for energy. But this engineered the spatial and social growth of the city in a precarious way. In fact, Caracas' urban terrain is a collage of discordant pieces alternately and simultaneously in conflict and cooperation. The processes that led Caracas to this point, again, can be linked directly to dynamic economic changes and the reactive policy shifts that the government of Venezuela enacted.

Rapid but fractured urbanization accelerated in the 1970s, when the country's link to the global economy grew, a shift caused by increasing worldwide oil consumption and the industry's nationalization in 1976. Policy was implemented to increase the government's control of international flows of ideas and commodities.[66] Capital from oil and the global linkages it created was invested into Caracas and the country's internal organization was restructured, driven by rising ambition of integration into the global economy. For example, under President Carlos Andres Perez, elected in 1974, oil and iron industries were nationalized; the state took control of 51 percent of the central bank, compromising its independence; and

65 Lacabana and Cariola, 188.

66 Especially influential was Caracas' substantial reliance on material and cultural imports from an infiltrating US lifestyle. Facilitating this cultural exchange, Miami played an important role in elite Venezuelan society. The newly rich, who benefitted from the oil income distribution, frequented the city for shopping, recreation, and real estate acquisition, especially during the 20-year run between the 1960s and 1980s in which the exchange rate was relatively stable.

the government established new state-owned enterprises, funded by profits resulting from the Arab oil embargo and the soft monetary policy of the United States. Despite – or perhaps because of - high oil prices in the 1970s that *tripled* revenue, the government grossly mishandled the economy, accumulating massive debt. Simultaneously, the state allowed for substantial public borrowing but did not foster a domestic economy that was that was able to reabsorb the money. The result was a steady export of capital. Most global consumption by citizens and the state was in the form of expenditures away from Venezuela.

The eventual weakening of oil commodities combined with problematic economic policy to create a debt crisis in the 1980s. The results were devastating, leading the state to sign an agreement with the International Monetary Fund. Like many other governments in Latin America, Venezuela was allowed to borrow on the condition of economic restructuring. Consequently, the state implemented exchange controls, continued devaluation under the guise of market reforms, and implemented new taxes that disproportionately affected the poor in spite of inadequate public services. The second administration of Perez in the late 1980s followed up with the liberalization of international trade, implemented, in part, thanks to increasing domestic pressure from political donors, academics and influential business groups, such as Grupo Roraima, a collective of business leaders and academics. These groups saw liberalization as a means to increase economic efficiency. The state based an economic model of liberalization on a gradual return of the oil industry to privatization. Simultaneously, they advanced the opening of the state to transnational corporations and related businesses, in an effort to curb the growing banking issues and unilaterally reduced tariffs.[67] Economic problems and government responses to them widened the income gap as housing became scarce and lending dried up. All these forces facilitated increased growth in the informal sector.

Indeed, as Caracas experienced rapid urbanization and global integration (image 4.4), the city harbored growing inequality and differentiation between income groups and social segments of the city. This disparity is a product of a number of forces. For example, much economic policy benefitted the wealthy, while planning strategies aimed at modernizing the city neglected the practical needs of the poor and middle class.[68] Infrastructural improvements, housing markets and

67 See Jonathan Di John, "Economic Liberalization, Political Instability and State Capacity in Venezuela," *International Political Science Review,* Vol 26, No 1 (Jan 2005): 107-124

68 In the last two decades, for example, the current government - which won power in the mid 1990s on a platform of socialism and wealth distribution - has been distracted by international interests related to worldwide economic and power issues, while the powerful financial elite of Venezuela has stymied any policy that might blunt their advantages.

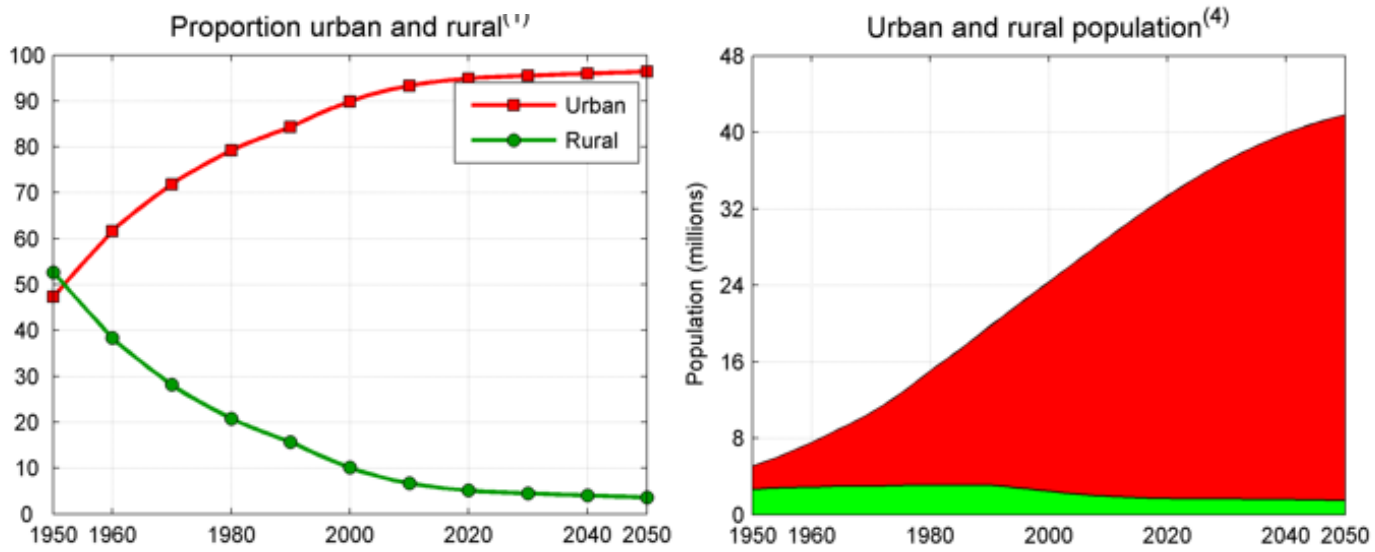


Image 4.4 Population data for Venezuela from the past 60 years with projections to 2050 demonstrates the country's move to a predominantly urban society. From *World Urbanization Prospects, the 2011 Revision* report by the United Nations Department of Economic and Social Affairs

economic growth had never been able to provide for the population expansion that began when the state started "sowing oil" into its cities. This problem was exacerbated by the policies implemented before and in response to the global economic recession of the 1980s. Facing a problem of financing various national programs meant to strengthen linkages between Venezuela and the global economy, the government actively neglected public housing needs.[69] The growth of Caracas' informal sector accelerated, outpacing the lethargic planning of formal growth.

However, rather than creating a dichotomous relationship of oppositions within the metropolis, this seemingly incongruent development of Caracas has instead been fragmented, creating a socio-spatial terrain of many pieces able to be assembled, disassembled and recombined. The results are new social patterns and relationships that facilitate negotiation and conflict between difference, and the urban fabric of Caracas has been built into a different paradigm. This model is composed of a complex set of internal and external linkages that coexist, overlapping and shaping each other, and thereby the greater urban terrain. Caracas as an urban center, is characterized not by "metropolitan dualization," but rather, by "a heterogeneous and complex socioterritorial fragmentation.[70]" In fact, this physical heterogeneity, created through historic

69 It did not help the situation that those at work within the Venezuelan government at the time reflected a social structure in which the wealthy and elite dominated. See Ronaldo Ramirez, Jorge Fiori, Hans Harms and Kosta Mathey, "The Commodification of Self-Help Housing and State Intervention: Household Experiences in the 'Barrios' of Caracas," in *Beyond Self-Help Housing*, ed Kosta Mathey (London: Mansell) 1991

70 Lacabana and Cariola, 188

Image 4.5 The urban fabric of Caracas has become polynuclear as a result of territorial segmentation. Here, a new commercial core outside an affluent neighborhood - Chacao - is the result of self-segregation by the wealthy. Still, informal settlements and sub-market economies has grown alongside to support the sanctioned development. Image by Rem Sapozhnikov (tiwy.com)

and contemporary urbanization processes, is often considered a defining feature of this city. Any image of Caracas as a modern urban center is challenged by the barrios and informal settlements that cover the undulating hillsides and parts of the inner city, butting up against the glass and steel that represents the cosmopolitan. This incongruity and disparity in the urban terrain give evidence of a new interpretation of the city based on a different analytical framework.

As Caracas has marched towards urbanization, the city has attempted to address the need for spatial specialization. Based on use and industries, this has most directly expressed itself through the creation of financial and business districts within the urban fabric. But the urban terrain has become polynuclear and expansive in its distribution: Along with urban cores dedicated to these uses, large commercial and recreational developments have spread. Most noticeably, these changes have manifested themselves in a new global business district located in Chacao, one of Caracas' richest neighborhoods that added to the existing high-end residential fabric (image 4.5). Characterized by impressive buildings dedicated to finance and business, as well as complementary facilities such as hotels, shopping centers and facilities for leisure and culture, this district has come to signify the globalized nature of the modern urban government. The result is a neighborhood in direct

Image 4.6 The historic entry way to Chacoa undergoes maintenance and redevelopment to improve the public space in a way that caters to the affluent. Image via gustavopierral.net

competition to other parts of the city, namely the old business district that is attached to the historic center of Caracas. Chacao also has become emblematic of the spatial fragmentation that is found throughout the city. The area is strongly linked to the global economy, and has been developed in its image, while fostering the socioterritorial specialization that caters to the upper classes (images 4.6).

Yet contradicting the character of this global business district, stark inequality has expressed itself in expanding economic and physical informality: the growth of informal sectors of the economy and the uncontrolled expansion of informal settlements or barrios. These neglected parts of the city have become areas of refuge for large populations for whom the formal sector does not provide housing or services. These modes of informality are an expression of the unforeseen consequences of the rapid urbanization and economic policies Venezuela has pursued. An informal subsistence economy has seemingly grown alongside – or has even outpaced – the formal sectors economy, while ad-hoc housing has expanded to support the growing population in poverty and even those considered by most standards to be in the middle-class. The informal economy of street vendors and the unplanned architecture and fragmentary growth patterns

of the barrios have consumed public spaces throughout the city's historic core. As unemployment in recent years has grown, informal urbanism has thrived, both in terms of economic sectors and the housing phenomenon, facilitated by an ambivalent federal attitude. The result is an increase in street-based commercial activity and unrestrained growth of barrios, further escalating the city's fragmentation and socioterritorial and functional specializations.

These conditions have produced far-reaching recalibrations in the social fabric of Caracas, altering labor markets and social structures within the city. Poverty, social marginalization and inequality have grown rampantly, reinforced by the spatial landscape of the city, fragmenting the population. Especially emblematic of this is the organic nature of the barrios in Caracas juxtaposed against the modern architecture and urban spaces. This contrast has become a symbol of the challenges that face rapidly urbanizing cities and is representative of the fluidity and resilience of the urban fabric which has been able to absorb, accommodate and reimagine itself.

Informality has been subjected to harsh criticism by affluent citizens, politicians and municipal planning and zoning departments. At the same time, it has been affirmed by local and global corporations that market within the barrios, and validated through community organization and political representation. Yet it might be difficult to gain a full understanding of how informality fits into Caracas' urban terrain. Much critique and understanding of the barrio is obscured by outdated modes of measure, or archaic values and frameworks. For example, the present day issues of socioterritorial segregation in Caracas that have intensified the grossly uneven quality of urban space, have not produced an organizational patterning of binary opposition which many associate with urban informality. Although urbanization and economic policy has led to "the emergence and juxtaposition of ways of living that reflect the progressive differentiation of metropolitan society,[71]" the fragmentation found throughout the urban fabric cannot be characterized simply as a polarization within the city. Rather, one can consider Caracas' urban terrain as being composed of multiple narratives constantly in negotiation with one another. The disparate fragments confront and intersect with one another through the interaction of physical and social structures. The city's character is built upon the intersecting spatial and organizational patterns as well as overlapping social relationships. This exchange occurs via economic linkages between the formal and informal sectors within Caracas and the

71 ibid, 189

forms that seem to challenge preconceived ideas of the modern city.

Although much overlap and crossover exists between groups, the spatial specialization that has promoted self-segregation might be considered through a specific tripartite social structure based on economic standing. The relationship between income and residential quality is extremely stratified because of underlying and growing inequality. For example, the wealthy and upwardly mobile middle classes in Caracas have benefitted most from the country's integration into the global economy. The rise of oil; the success of finance, technology and communications sectors; and the growth of other segments of the economy related to the emergence of transnational corporations within the city have galvanized the power of the urban elite, who, although in the minority, have been able to seize a large portion of the country's wealth. This has enabled them to isolate themselves within the city, using neoliberal development strategies to construct their residential space in a way that maintains a socioterritorial homogeneity while reaffirming their social identity. Typologically, this lifestyle has expressed itself through both the gated community and luxury condominium, both of which have thwarted extreme isolation through state-of-the-art technologies in communication such as internet-based video-conferencing.

The evolution of Venezuela's middle class is also strongly linked to the economic and political movements towards global integration and modern urbanization. These changes, which began in the 1960s and were stoked by the economic boom of the 1970s, produced the collapse of the financial market in the 1980s. The result was widespread poverty and exclusion of certain segments of the population, and the restructuring of policy in the 1990s. Previous to this restructuring, the economy and state of Venezuela had facilitated the growth of the middle class: The burgeoning democratic nature of the state supported upward mobility through access to higher education for lower-income groups. This, in turn, produced a middle class, an intermediary founded on professional careers and characterized by particular patterns of consumption and lifestyle. However, unlike the advantages experienced by the financial elite, the opening up of the economy at the turn of the century complicated the aspirations of those in – or those aspiring to be in – this demographic. As Venezuela's economic stability collapsed, the social identity of these citizens has been rendered ambiguous. The middle class traverses a social terrain in which they are caught between assimilation into the benefits of a global economy and survival of poverty, often

struggling to preserve the privatized world of modern urban residential space. The growth of the middle-class of Caracas has come to a halt, while those once considered in this group have experienced a steady erosion of living conditions linked to ballooning unemployment and falling incomes. They provide an example of the ways the formal and informal have mixed and overlap. Some in the middle class, for example, straddle two worlds by living in barrios while working in formal employment.

Perhaps most remarkably, the low-income and impoverished sectors have become synonymous with one of the most spatially unique phenomena in the city. The urban poor of Caracas have used adaptive strategies, notably in the residential sphere, to subsist under the conditions of the globalized city. These conditions have marginalized the large lower class, pushing them to the social periphery. While they represent the "other," though, they have not been banished to the spatial periphery of the city. This widespread condition has expressed itself through the ad-hoc self-building of substandard dwelling units – barrios of unsanctioned construction of residences on illegally or informally occupied land. Though the nature of these neighborhoods seems temporary, these strategies have been pursued in response to the lack of desirable affordable housing provided by the government, as both a means of housing and a way to earn income through rent.

The city of Caracas has nearly one-third of its 3.8 million citizens living in informal settlements. The barrios of the city are precariously built outside regulatory processes and without oversight of government building departments. Although self-built and ostensibly temporary in their initial development, many of these informal settlements have gone through community consolidation, a process facilitated by the passive response by the state, and one that nearly assures their permanence. It is beyond the capacity of the city to provide housing for a significant portion of the urban poor, and while the state became more concerned with international politics, the invasion of both public and private land for the purpose of self-built housing was tolerated or ignored (image 4.8). But these settlements were not acknowledged through any political means, leaving the barrios in a state of limbo, clearly intertwined into the socio-spatial terrain, but simultaneously ignored or invalidated. Municipal maps from the 1970s through the 1990s, in fact, rarely represented the swaths of barrios, instead

Image 4.8 Historic imagery of early barrio development. Land invasions for the purpose of self-built housing were tolerated or ignored, allowing settlements to proliferate and densify. By the 1960s, government in-situ improvements had already begun, bringing permanence to something ostensibly temporary. Image from "Integration Paths of Barrios in Caracas, Venezuela," by Volker Kreibich and Alonso Ayala (raumplanung.tu-dortmund.de)

leaving these large areas of the city shaded in green and devoid of structure.

In more recent times, through an administration that was elected on a platform of socialism and wealth redistribution, the state has formally acknowledged these neighborhoods. This has been accomplished through programs that support or at least accept urban informality. For example, rather than attempts at removal, the state's strategies have shifted to attempts at in situ improvements and mitigation. Government policy seeks to limit further growth of barrios through containment while simultaneously protecting public lands that remain to prevent citizens from the hazards of building on unsuitable sites. The state has also implemented massive upgrading and consolidation programs that seek to improve infrastructure, provide sanctioned access to municipal utilities, and deliver social services such as health care to inhabitants through state-sponsored medical facilities. Although the success of these programs largely avoids dealing with the reality of the conditions in the barrios, the effort by the government to further integrate these communities into the formal urban fabric alludes to the evolving nature of the globalized city – one in which various fragments exist in a constant, dynamic interplay.

Images 4.9-4.10 (l) Children in the streets of a barrio in Caracas play baseball in the alleys; (r) Students in the barrios at the Escuela Popular para las Artes y Tradiciones Urbanas take classes in urban conditions such as rapping, one expression of the rich social capital within these settlements. Barrio life can be lively and have strong social networks, a character that contrasts with what some say is the generic formal urban fabric. Images by Lainie Cassel (r) from (venezuelaanalysis.com) and Jonas Bendiksen (l) from *The Places We Live* (New York: Aperture, 2008)

Further testifying to the complexity of the urban terrain, the living conditions within the barrios are extremely varied. Barrios are spatially segregated and socially excluded from the surrounding "formal" fabric of the city, and often lack necessities including water, plumbing, electricity, infrastructure and secure land tenure. However, not all inhabitants are impoverished. In fact, the majority of citizens living in long-established informal neighborhoods have been able to exploit some, if not all of these amenities from the city that surrounds them. For example, citizens have been able to obtain water, electricity, and even cable and satellite television by covertly connecting to the municipal grid. Further, the common image of the slum – of squalor, filth, flimsily built shacks and misery – is distinct from the reality of most barrios. While these qualities exist in these informal neighborhoods to an extent, they are neither their defining characteristic nor overpowering in their presence. Instead, the landscape is dominated by solid, brightly colored buildings and often-lively street scenes. The other common perspective, which is equally questionable, is based on the idea that these areas have strong social capital founded on robust community networks (images 4.9-4.10). This glamorized perception of barrio life is problematic, but is not entirely without merit. There is, in fact, a strong sense of community grown out of the common marginalization from the formal city and the feeling of achievement gained through a grassroots effort at building a home and a neighborhood

Images 4.11 Although barrio life can may be lively and have strong social networks, it is important not to romanticize the situations: many in these settlements are still subject to abject poverty. Image by Jonas Bendiksen from *The Places We Live* (theplaceswelive.com)

or owning one's own (informal) business.[72] Further, the residents' shared sense of history, gained through a common or overlapping narrative, has helped them develop emotional ties within their barrios and similarity between their individual's readings of space. In aggregate, these phenomena have reinforced social capital.[73]

While spatial segregation and social exclusion from the formal city has fostered a dynamic socioterritorial phenomenon within some barrios, relying solely on this idealized myth of community empowerment within Caracas' informal sector is problematic because it romanticizes the situation, a problem seen repeatedly throughout the literature on informality. While the image of the barrio – the undulating hillsides of low-rise buildings, developed in random patterns – is powerful in its contrast to the urban gridiron or globalized hyper-urban form that Caracas has adapted, it would be incorrect to overstate the benefits of living within informal settlements (image 4.11). In fact, rather than considering the singular typology of the barrio, settlements in Caracas are better understood as a diverse microcosm, that related to the city around them. For example, when examining the seemingly organic nature of the barrios, the notion of an unplanned organization is challenged. Instead, it is clear that there exists a legibility that is merely based on an alternate set of planning principles.

72 see Perlman, 1976

73 Garcia, Isabel, Fernando Giuliani and Ester Wiesenfeld, "Community and Sense of Community: The Case of an Urban Barrio in Caracas," *Journal of Community Psychology*, vol 27, no 6 (1999): 727-740.

Image 4.12-4.13 Images by Pietro Paolinii (l; terraproject.net) and Emma Lynch of the BBC News (r; news.bbc.co.uk)

The self-built nature and historic growth of these different neighborhoods are, in fact, characterized by a specific terrain built from readable elements such as equitable housing units, particular styles and materials, and provisions taken to facilitate future growth. For example, like many other informal settlements in Latin America, most residential units build dwellings one story at a time, yet plan on future verticality by always leaving enough rebar protruding from rooftops to allow for secure construction of future levels. Similarly, roads and paths within these neighborhoods seem to follow specific dimensional standards and hierarchies. Programs and typology other than housing – for example, small businesses that vary from bodegas to tailors and are usually run out of homes – are likewise comparable throughout various barrios. Furthermore, these neighborhoods are beginning to gain governmental recognition, including programs targeting populations within the barrios. These include government-sponsored *mercales*, where groceries can be purchased at below-market rates, and programs such as *Mission Barrio Adentro*, which offers free health services for residents through federal support (images 4.12-4.13). Government-sponsored initiatives such as these, as well as *Casas de Alimentacion* - a program that delivers free meals to those in need - are an alternate response to informality, that leans toward integration and formal organization.

Images 4.14-4.15 Although there are some improvements in place, most barrios still lack some basic neccessities, such as garbage removal and safe infrastructure. Images by Emma Lynch of the BBC News (news.bbc.co.uk) and Pietro Paolini (terraproject.net)

On an urban scale, Caracas is often described by its physical heterogeneity - a fragmented fabric that segregates informal slums and their economies from the formal, which are celebrated areas built on wealth from oil and economic policy that has benefitted the wealthy. But the reality is much more complex than that. The character of the city is one grown from an intertwining of the formal and the informal. For example, as barrio growth has outpaced growth of the formal parts of Caracas, a seemingly chaotic group of settlements has been able to organize, using grassroots community association models, to challenge the hegemony of the state. This form of negotiation between the formal and informal has facilitated change in both realms. The government has come to recognize and address the informal, and the informal is using tactics of the formal to gain position. On the ground, this has expressed itself in various programs. Though land tenure is rare, infrastructural upgrades, such as paving of dirt roads and public transportation connecting barrios to downtown cores, have brought permanence to something supposedly temporary. At the same time these in situ improvements tend to come with greater restrictions to halt further land invasions. This negotiation is also expressed in the social terrain. The state and city have sponsored a number of social programs specifically meant to address inequality brought to their attention by these community associations and have established official municipal planning offices within at least one major barrio, to address

further development concerns.

The diversity within barrios reveals the intricacy of the situation. Inhabitants of barrios are employed in positions within the formal and informal economy, and sometimes both, which is an example of the overlap and fluidity that exists between the two. There are physical connections between the two sectors, perhaps most evident in the growth of formal utilities within the settlements. Electricity and satellite in some barrios, for example, started as pirated services that became legalized as companies understood the size of the market. Municipal water and sewer, while not provided for during barrio

Image 4.16 On the surface, Caracas is segregated and framented - two cities characterized by their disparate wealth and physical expression thereof. In reality, the formal and informal pieces of the urban fabric have many changing socio-spatial exchangess and linkages between them, these relationships and potentials layering upon each other and advancing the city to a different future. Image via urbanmedic.blogspot.com

development, have, in some cases, been extended to some informal settlements, as the state implements in situ improvements. In at least these ways, the formal pieces of the urban terrain are infiltrating into the informal, reshaping the socio-spatial patterns of the barrios in very mainstream ways. The social programs being implemented the in-situ improvements that began as early as the 1960s, and the self-organization of community association to gain strength in political action all testify to the overlap and confrontation that is taking place and reshaping the urban terrain of Caracas.

Caracas provides an excellent case through which to apply new analytical frameworks to an interpretation of the contemporary city. Guided by Deleuze and Guattari, a reading of Caracas' informal urbanism – its demonstrated polarization, disassemblage and reassemblage, and how it uses this complexity to create a socio-spatial urban terrain – challenges previous scholarship that views informality as anomalous or problematic. This new interpretation of informality, in fact, allows for an understanding of Caracas as a more holistic, diverse form of the metropolis, a more inclusive, rich version of the contemporary city. While on the surface it appears that the formal and informal are caught in a binary, opposing relationship, the reality is much more complicated. No space in Caracas is ever purely formal or informal; forces at work in the city layer one onto the other. Spaces are constantly evolving, organizing or being invaded, moving from one to the other and back again. Caracas is distinctive in that it has created an alternative paradigm through which to consider how these ostensibly incompatible elements of the urban fabric recombine to create an urban terrain that is a modern metropolis. The opposing and confronting narratives within the city produce a friction, but the formal and informal are caught in a relationships and potentials for both cooperation and antagonism producing texture and depth in the city through an all-interplay between diverse segments.

Lived Space **within The Fragmented City: El Torre de David**

The office tower, once one of Latin America's tallest skyscrapers, was meant to be an emblem of Venezuela's entrepreneurial mettle. But that era is gone. Now, with more than 2,500 squatters making it their home, the building symbolizes something else entirely in this city's center.[74]

74 Simon Romero and Maria Eugenia Diaz, "Caracas Journal: A 45-Story Walkup Beckons the Desperate," *The New York Times*, Feb 28, 2011.

Image 4.17 A close up of El Torre de David (The Tower of David), compared to the earlier image of Caracas' downtown skylike. The tower, in focus ont he right, is circled on the left. Image by Meredith Kohut for the New York Times (nytimes.com)

The economic and political strategies of Venezuela, in striving for integration into the global economy, have created a pixilated image for the city of Caracas. The population is increasingly fragmented into two groups - the financial elite and the masses of downwardly mobile or impoverished citizens. The once-growing middle class, long viewed as an intermediary that could incorporate urban society, is endangered, while the formal fabric of the city is being altered to reflect the modern caste system of extremes. The formal sector in Caracas is expressed in a globalized image of luxury – new business centers that challenge historic cores with development grown from the oil industry, and rooted in finance, transnational corporations, communication sectors and supporting service industries. Simultaneously, the resulting marginalization and social seclusion of those outside this economy have created a seemingly opposing spatial condition found in the informal settlements and sub-market economies that place themselves throughout the core of Caracas and beyond. Yet the various parts this complex urban fabric - the barrios and the luxury condominiums, the informal economy and the secluded neighborhoods of the wealthy – are all partaking in a dynamic choreography. This is expressed through the flows and paths between the formal and the informal, such as the slow but undeniable integration of the barrios into urban plans, and architectural designs by

the government and some private companies that work in parallel with them.[75] The social and spatial negotiations that take place within the urban fabric – at the confrontations and exchanges between these seemingly incongruous segments – give Caracas depth and texture built from diversity. And, just as housing becomes an expression of the complex issues involved in understanding the city, it offers insight into how these negotiations articulate themselves at the scale of the individual. The dwelling – and in this case the barrio – has the unique ability to act as the inhabitants' interface with the city while simultaneously providing a spatial condition that directly challenges the traditional, championed form of the modern city. Particular barrios in Caracas reveal how the citizen experiences the evolving nature of the globalized city: a flexing urban fabric created from an aggregate of layered, confrontational pieces.

Demonstrative of this condition is El Centro Financiero Confinanzas, or El Torre de David, an unfinished skyscraper in downtown Caracas. Well within the historic core of the city,[76] the building was designed to conform with the accepted image of the contemporary metropolis. With a skin of glass and metal draped over a concrete structure, it aligns well with the adjacent urban patterns. In fact, the surrounding area might be characterized by its adherence to a particular image of modernity and the global economy. The predictable city street grid is overlaid onto the historic organization, and the dominant architecture is that of transnational corporations and high-end industries and supporting services, all of it championing Venezuela's power and economic prosperity. Yet this discourse is interrupted by the reality that El Torre de David has come to represent (image 4.17).

Begun in 1990, during a short-term period of rapid growth aimed at global integration, the tower was meant to embody the prosperity and potential of Venezuela. Conceived as a bank and a hotel, it was supposed to be one of Caracas' most prominent office towers. But the project broke ground shortly after the national economy opened up and the state pursued aggressive economic policy restructuring that created a precarious financial environment. Construction of the tower halted in 1994 when its developer, David Brillembourg, passed away. Due to the Venezuela banking crises, the economy reached a low point during this time, the bank that took possession of the project collapsed, and the federal government acquired the property during the nationalization of half of the country's financial institutions.[77] However, since

75 For example, Alfredo Brillembourg and Hubert Klumpner's *Urban Think-Tank* which seeks to create engage these communities while advancing grassroots and bottom-up initiatives for barrio improvement through design.

76 El Centro Financiero Confinanzas is located on the northeast corner of Calle Real de Sama and the major thoroughfare, Avenida Urdaneta.

77 The nationalization of much of the banking industry at this time was an economic strategy supported by the new administration of Hugo Chavez, a socialist regime.

Images 4.18-4.19 Despite the arduous task of hauling building materials up several stories, and the concerns for safety, citizens have pressed on, slowly taking over floor after floor of El Torre de David, constructing walls and taking up residence. Images by Meredith Kohut for the New York Times (nytimes.com)

the acquisition of El Torre de David in 1994, the state – since then preoccupied with various domestic and international programs - has not made efforts to either complete the project or sell it to a third party. The latter of these options is especially difficult given the tight lending restrictions and the unavailability of credit in Venezuela. Aggravating this situation is Caracas' acute housing shortage, a problem that has plagued the country for decades and has yet to be addressed by the State or city. Private construction of affordable housing has halted based on fears of seizure by the socialist government. Although historic problems with corruption have also created difficulties, contemporary inefficiencies and distractions abroad remain the biggest obstacle to affordable housing.

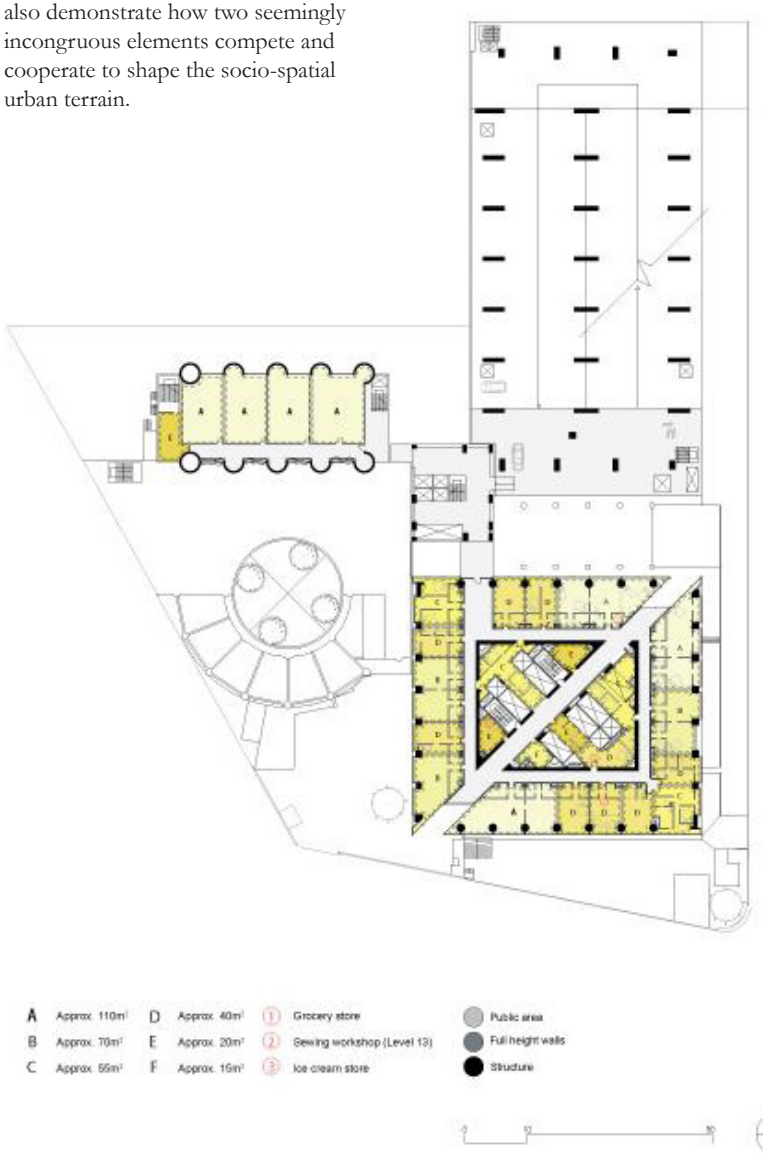
El Torre de David stands as high as it had been designed – forty-five stories tall – yet the interior is not nearly completed, nor was the curtain-wall system finished. Instead, the skyline of the city is marked by an unfinished office building, a symbol of the state's failures and complexities rather than its power and wealth. While neither the Venezuelan government nor the Caracas administration has taken action to complete the building, masses of resourceful citizens have taken to constructing informal settlements within the structure. Almost as soon as the government took ownership of the

Imags 4.20-4.21 (l) Many of the stairs and terraces have no safety rails and some lack much more than the concrete structure of the planned edifice. (r) Still, there exists a bodega on nearly every floor, as well as several other businesses including a barber, a child-care facility and a bakery. Images from Meredith Kohut of for the New York Times (nytimes.com) and Iwan Baan from the exhibit *torre david gran horizonte.*

property, inhabitants began building, claiming and improving space within. This hybrid skyscraper-barrio has become home to over 2,500 residents (by no means the largest barrio in Caracas), and although the government has taken a laissez-faire attitude, the conditions are vocally admonished by some within the administration who describe the living conditions as "anarchy." Yet citizens press on, as they have in barrios across the city, refusing to wait for the government to take action (images 4.18 and 4.19).

Residents of El Torre de David have slowly taken over floor after floor following a mass invasion in October 2007. As of 2011, residences have reached as high as the twenty-eighth floor, despite the lack of mechanized vertical transport, life-safety standards or sanctioned utility connections. Inhabitants are known to visit floors even higher, via the unfinished concrete stairs that continue to the top floor (image 4.20). The residents have used their own materials to improve the spaces, hauling everything from heavy masonry units to furniture to the highest stories without the use of an elevator. They have tapped into electricity, water and sewer themselves, and boast amenities such as satellite television, security forces that keep unwanted persons out, interior courtyards and public spaces, and neighborhood organizational bodies to manage social

Images 4.22 The architectural plan of El Torre de David shows the regular, formalized structure of the bulding, which the residents have comondeered and used for their own purposes. The two offer a harsh contrast but also demonstrate how two seemingly incongruous elements compete and cooperate to shape the socio-spatial urban terrain.



events and establish rules for living in the tower. The social patterns of the tower are rich and established through specific rules and obligations. For example, like hillside barrios – whose dwellings are unplanned, but nonetheless demonstrate equitable land division and infrastructural hierarchy - the residential units in the tower are nearly equal in size. This balanced approach to a seemingly random process of claiming space is a product of both regular, formal structure, and community organizations that have set up rules for inhabitants. This organization is legible and relates to the planning principals of greater Caracas, with units surrounding common areas just as blocks surrounds squares and neighborhoods surround public plazas in the city. This pattern is also evident in the processes by which new residents acquire space. New inhabitants must apply to community organizations specific to the floors on which they wish to live and fees for living in the tower ($15) have been communally established. If accepted, assuming they are building out a new unit, citizens begin the arduous task of bringing building materials up to their unit. The reorganization of the formal by the informal takes effort and material, the process of hand building partition walls is difficult, and results in a pattern of red masonry and overflowing grout that is juxtaposed against the regularity of the building's formal structure (see image 4.21a).

As they adjust to living in the tower, residents obtain the amenities that come with monthly fees. The management of the building is divided into three departments: health services, recreation and security. The community organizations have established security forces to keep unwanted persons out, and set up the interior courtyards and public spaces in which social events take place, community meetings are held or neighborhood sports leagues play. These fees also cover utilities illegally procured from the city, as a result, the service is questionable, payment is made under the table, and water and electricity systems are self-built. These organizations have also served to make residents active participants in their community.

Image 4.23-4.24 The spatial patterning of El Torre de David utilizes organizational structures similar to that of formal planning in greater Caracas: blocks around courtyards and neighborhoods around plazas. In the tower, these spaces are administered by community organizations and used for organized sports and association meetings, which serve to strengthen community networks. Images from the Urban Think Tank, Iwan Baan and Justin McGuirk, from their exhibit *torre david gran horizonte.*

Like similar groups in other barrios, they give citizens a stronger political voice, while strengthening social networks (image 4.23-4.24).

It is, however, important not to romanticize the conditions in El Torre de David. While the social capital within the tower is strong, the community still lacks certain municipal services and fails to meet important safety standards. For example, there is no refuse removal for the building, some areas lack walls and windows, and few of the terraces have guardrails, exposing the residents to unnecessary danger.[78] The plumbing and wiring necessary for access to municipal utility networks is, in fact, self-built, with hoses and wires crudely installed throughout the residences. And the process through which residency is established is cumbersome and difficult, and the vertical growth of the barrio, without the use of mechanized transport, necessitates a labored construction process that finds many new residents living in tents, lacking even basic needs such as bathrooms and kitchens (image 4.26).

The governments of Venezuela and Caracas have different perspectives regarding El Torre de David. The state's

78 There have, in fact, been a handful of deaths caused by falls from unprotected terraces, most notably those of children. (Romero and Diaz)

Image 4.25-4.26 (l) Business have taken route in the tower, a platform for small, informal enterprises such as barbers, bakeries and day-care facilities. (r) The process of building - the continuted consumption of the formal tower by the informal settlement - is laborious, with many new residents living in tents as they hand-build partition walls. Images by Iwan Baan and Merideth Kohut.

response has been marginal, offering the same approach laissez-faire that has also allowed other nascent barrios to grow. It has largely ignored the tower as it has other informal settlements, but, distracted with international affairs and the economy, it has also neglected the larger need for affordable housing. Simultaneously, city planning officials criticize the space as unsafe and illegal while other, affluent critics argue that it should be taken back by the government and outfitted properly for its intended purposes. The call for prime office real estate is especially loud now, as the economy expands with global energy demands and commercial rents go up.[79]

These demands for the acquisition of space and the dismantling of the communities within the tower are predicated on the assumption that the residents and their dwellings "don't belong" in the neighborhood or in the structure. While the tower's current use is far from that which was intended, this thesis suggests that this criticism is misplaced. Rather than try to forsake the informal – the smoothing of space – for the formal, we are compelled to understand the tower in a different way. All of the discussed exchanges within the tower reflect the coexistence of two ostensibly incongruous sectors that are developing in response to one another. The changing relationships between the formal and informal on the urban scale

79 The GDP of Venezuela expanded 5.2% in the last quarter of 2012, over 5% on the year; when the banking sector grew over 35%.

Image 4.27 “the richness of the social fabric juxtaposed against the sterile, lifeless framework of the unfinished financial center” Image by Iwan Baan

have produced a novel geography. Within it and around it characteristics of both are negotiating for space, confronting one another, overlapping and influencing each other. At this human scale, much of the tower straddles both worlds, constantly moving between them, slowly becoming more one than the other, and back again.

A complete understanding of the conditions experienced in El Torre de David is one that fully considers the complexity of the relationships. The existing physical presence of the tower, exemplified by its regularity in structure and precision in calculation and construction, is symbolic of the globalization process that blankets Caracas and the formal economic and political policies that have shaped it. The organic spatial patterns of the squatters juxtaposes the reality of social exclusion and government neglect of the poor that has come with those priorities. The spatial overlay of one onto the other, and its social repercussions, have become emblematic of the country's economic recession and the growth of poverty and disparity within Venezuela. These contradictions are physically expressed in the hand-laid brick masonry units held together with overflowing grout that partition the familiar order and precision of concrete column bays; in the bright colors of personalized paint choices that contrast the gray skeleton of the top-most stories and unfinished floors; and in the richness of the social fabric juxtaposed against the sterile, lifeless framework of the unfinished financial center (images 4.27). The negotiation between the formal and informal can also be seen in the economic systems of the tower. For example, the livelihoods of residents, some of whom are employed in jobs that vary from those traditionally associated with the formal global economy to those of the informal nature, present an odd relationship between the two ostensibly separate worlds. In fact the diversity within barrios such as El Torre de David includes residents firmly in the middle class. These residents - who move quickly and freely between formal employment and informal settlement - represent new ways that citizens must traverse the complex urban terrain, one that is constantly shifting, responding. The tower - its spaces, economies and social structures - exhibits the complex interplay between the formal and the informal - the interaction of the smooth and the striated.

Indeed, the entire existence of an informal settlement within the tower speaks to a collision of worlds. There is perhaps nothing more emblematic of the formal than the tower as conceived and built – a modern edifice bank-rolled by

Image 4.28 Image by the Urban Think Tank.

a financial institution, whose ownership was transferred to the state, whose neighbors within a downtown core of Caracas still include two of the country's largest banks. The infiltration by informal settlements reflects the formal city's inability to accommodate massive growth, which itself was responsible for the creation and expansion of informality. On this scale too, the formal and informal must exist in a relationship fraught with both cooperation and competition. The smooth will constantly invade and resist the striated, the striated will seek to take over the smooth. And the tower, physically and socially, is the example par excellence of an alternate paradigm in cities today – a model that includes overlap and arbitration between ostensibly incongruent forces.

El Torre de David encapsulates the complexity of the globalized urban fabric of Caracas: a labyrinthine network of relationships, linkages and flows between what is easily viewed as discordant parts of the city. Yet reading this case study as an alternative example of the experience within the modern urban fabric provides a more complete understanding of the globalized city. It is an understanding that is inclusive of many opposing elements, one that accommodates more. Rather

than championing a particular spatial and social experience – that which is most closely associated with the wealthy and elite – interpreting the globalized city through the paradigm set up by El Torre de David, like its host city of Caracas, challenges the paradigm that isolates and ignores informality while marginalizing its citizens. The barrios are not anomalous within the terrain of the city. In this case, the tower exemplifies the means by which the informal negotiates and challenges the formal. Rather, this case supports a different paradigm, an archetype that produces a richness and diversity. The confrontation and negotiation between apparently unrelated fragments of the globalized city creates a texture that, this thesis argues, should be seen as typical to the emerging metropolis. The interactions and interrelations between seemingly incompatible lifestyles within the city, along lines of spatial linkage and socioeconomic exchange, produce the fluidity and flexibility within the socio-spatial urban terrain that make it more inclusive and give it more depth and texture, thereby making it more authentic.

Chapter 5

Theoretical Frameworks for the City of Tomorrow

The Smooth and the Striated: The Value of Slums in the Championed City

> *What we are responding to as architects has been determined by institutions and primarily from a Western perspective. I'm interested in looking for alternatives that would really examine density or economic development. In that sense there is an incredible power found in informal configurations of density and economy that could shape our ideal city. It's not about reproducing the shantytown, but to translate it.*[80]

This thesis used terms established by Deleuze and Guattari to engage and describe the urban condition in a new way. It asserts that informality is not, in fact, an anomalous situation that threatens the formal patterns within cities, despite the criticism by municipal planning departments that view it as chaotic and dangerous, affluent citizens who lobby for further regressive tax policies, and that urban planners who want to design or "solve" for their perceived problems. Instead, this research emphasizes the complex relationships between the two, as they coexist in intricate interplay, traversing the city and reshaping it as they go. Thus, this thesis employed key ideas from *A Thousand Plateaus,* such as *rhizome* and *the smooth and the striated,* as instruments to measure and describe the amorphous socio-spatial terrain of the urban world. Informality is merely one aspect of a larger body – the expression of a mix forces whose conversation and potentials shape relationships between actors and spaces. The linkages between these parts are constantly changing, taking different forms the are nonetheless composed of the same elements. The bodega in the squatter settlement within a skyscraper,is a product of the same forces, albeit in a different manner as the sanctioned urban development seen in the glass curtain walls and concrete grid iron that surround it. The nature of the contemporary metropolis is one that layers, arranges and rearranges these relationships, the various assemblages expressed as ad-hoc settlements and sub-market economies as well

80 Teddy Cruz, interview by David Sokol, "Repositioning Practice: Teddy Cruz," in *Architectural Record*, October 2008. Available online at http://archrecord.construction.com/features/humanitarianDesign/0810cruz-2.asp, accessed September 2012.

as luxury beach front condominiums, tract housing and glass skyscrapers funded through international commerce. The seemingly contrasting geographies are in reality continuously conversing, coexisting in cooperation and antagonism, each taking on characteristics of the other. The formal and informal interject themselves into the urban terrain, reorganizing it as it evolves. The new hyper-urbanized city, which seems to hold both types of spaces might be a "precursor to a new kind of urbanism,[80]" one that is not necessarily fully understood in the discourses of modern Western theory.

To support this interpretation, case studies of specific Latin American cities examined contemporary models of informality. This was accomplished by applying a critical analysis of urban theory to the economic, social, historic and spatial conditions of Rio de Janeiro, Brazil and Caracas, Venezuela, using information gathered from interdisciplinary sources. This was done to corroborate the interpretation of the city as an interplay of forces producing both the formal and informal, pieces that interact much the same way as the smooth and the striated. Each case included a consideration of the respective city's historical narrative, a multi-scalar analysis of the city's urban fabric, as well as its conditions of informality. More specifically, informal settlements and informal economic activity was examined as it relates to the formal. Informality's role in the larger terrain of the city and the global landscape was also considered. Evaluating the urban terrain in these cities is especially enlightening because of their qualities as non-Western metropolises of the global south that have rapidly urbanized. This allowed a critical analysis of the glorified image of the globalized city - a representation built on Western models of the modern, cosmopolitan metropolises and advanced through mass media, commercial institutions, and the policies of state or government, and one which tends to eliminate informality through policy or practice. Each case study also examined particular neighborhoods within each host city, demonstrating the different dimensions which the interplay between the formal and informal is manifested. The two offered insight into scales distinct from one another – revealing the ways informality is expressed through the neighborhood character and its relationship to the greater city - in the case of Rocinha in Rio de Janeiro, and reflecting on the repercussions to the individual in case of El Torre de David in Caracas.

These case studies support a new interpretation of the urban terrain as something created and enriched by the conversation that seemingly incongruous pieces have with each other. Deleuze and Guattari's vocabulary is particular

81 Matthew Gandy, "Learning for Lagos," New Left Review 33 (2205) 39

useful in describing the phenomena at work. The continuously shifting forces and interactions that shape it are likened to the smooth and the striated; the inherent complexity of the urban terrain much like the rhizome, a body comprised of exchanges and potentials that come apart and reassemble in new ways. The relationships and processes that emerge between coexistent pieces such as the formal and informal manifest themselves in the geographies of the city, affecting its landscape. The argument stands that informality is not anomalous in the contemporary city, but rather that the city should be thought of as a composition of confronting and negotiating elements. The body of the city - the rhizome - is made of a plethora of elements. The formal and the informal are partners in constant exchange, their unending, evolving relationships giving the city depth and texture. In both Rio and Caracas, the formal and the informal are caught within a curious interplay of complex relationships and potentials created by hyper-urbanization in spaces unprepared, this complex network defining and redefining the urban terrain.

Indeed, these examples of the contemporary urban condition recall the argument within the main body of *The Smooth and the Striated*; this is expressed at multiple scales. For example, on a spatial level alone, the dialogue between "smooth space" and "striated space" in the urban fabric is seen throughout the city. In both Caracas and Rio, informal settlements are invading the spaces between and around the formally planned and built areas of the urban centers. This is especially evident in these models because unlike other cities where slums and shantytowns exist, the ad-hoc settlements do not conform to standard models of development that relegate informality to the physical edges of development. Rather, because of the historic and physical conditions, informality has grown into areas that are internally peripheral. These spaces – such as areas under freeways, along transit corridors or sites unsuitable for sanctioned development – have provided the social, economic and spatial geographies of informality with a means to enter the championed spaces of the formal dominant economic narrative. On the surface, class-based spatial segregation seems to be the urban-scaled manifestation of the relationships between the informal and formal. Yet it is more complicated as these spaces more intertwined than even the patchwork of maps suggests. In reality, these spaces and economies - both the sanctioned and unsanctioned - are continuously changing, accommodating forces that push them toward formality or informality. Thus, like smooth space, informal settlements are not themselves purely informal, but rather subject to response and recapture by the formal. The opposite is true as well.

As spaces become overly planned and organized, they are subject to invasion by the informal. This is seen throughout each city, at multiple scales. The examination of Rocinha and the Torre de David illustrate the extent to which the informal is spatially coupled with the formal.

The physical relationships between the legal and the illicit are part of the urban terrain. They are demonstrated in several ways. First, the fact that municipal roads have been built through barrios and favelas speaks to the relationship between the formal and informal. This is especially evident in areas such as Rocinha, which benefit from proximity to affluent neighborhoods. The recognition of commercial interdependency is demonstrated by infrastructure sanctioned and sponsored by the state. This has included building new roads through settlements, the improvement of those that already exist, and other developments, such as the construction of a now-famed gondola that transports residents from specific barrios to the city's metro system. Similarly, examining the spatial organization in both formal and informal areas of these cities reveals the relationship and influence of one over the other. For example, in both Rio and Caracas, the pattern of development still exhibits equitably quartered spaces surrounding common areas for public use. The architecture and form of these ad-hoc settlements reflect the self-built nature of the structures and use a language and structure that is different than traditional settlements. But the roots of the spatial organization are still related to those of their host cities, each drawing from their guiding principals, appropriating what is suitable and reshaping it to their needs. Finally, the spatial overlap and exchange between the formal and the informal is expressed in the infill development and improvement of the abandoned banking tower by squatters. The case of Torre de David is in fact a paradigm in which the smooth and the striated. The informal settlements have invaded a space created for the formal, overlaying a radical physical presence of seeming chaos onto a predictable structure conceived in the image of the global.

These exchanges and potentials – the negotiations between the smooth and the striated - are also articulated beyond the spatial qualities within each city. Although the organic, fractured architecture of informal settlements has become a symbol of the deleterious effects of globalization, they also represent greater linkages that in accretion create the urban terrain. For example, the relationships between the dominant commercial narrative and shadow or sub-market economies

in both Rio de Janeiro and Caracas depict a total economic fabric that is both rich and diverse. These seemingly disparate pieces of the economy, in fact, rely on each other to provide a complete commercial system in which much of each city's population participates. This economic intertwining is evidenced in multiple situations, such as the presence of franchise locations like McDonald's and CrossFit within barrios and favelas such as Rocinha; the activities of mainstream businesses such as cable and electricity providers who target the inhabitants of these settlements in their; the saturation of labor and service industries by these citizens; and the increasing acceptability of these housing conditions during times of general recession. The many citizens who straddle both realities - freely and quickly moving between worlds characterized informal housing and formal employment - testify to these overlaps between seemingly segregated sectors. Further, secondary and tertiary service industries have developed within informal settlements – such as day care in the Torre de David – which speak to the inhabitants as fully participating and exchanging constituents of the economic terrain of the city at large. In fact, some scholars have hypothesized that while the dominant economic narrative in cities has been championed, it has still been unable to fully eliminate the shadow economies that exist to support it.[82] In fact, the formal economy, in many measurable ways, relies on the informal, which tends to provide manpower for the service and labor industries that, while devalued, are nonetheless crucial.

The friction and negotiation between the disparate pieces of urban fabric resonate on social levels as well. For example, on the urban scale, informal settlements are making inroads towards mainstream integration into the city at large. Programs that aim toward infrastructure improvement and increased social services – such as the Favela-Barrio Project in Brazil - illustrate the reach that collective groups within these settlements are starting to have. The use of grassroots-level campaigns has been especially crucial and productive. Thus, examples such as the public forum in barrios in Caracas or hierarchical community organizations within the Torre de David demonstrate the social platforms on which the negotiation and overlapping between these ostensibly differing segments of the urban fabric exist. In these cases, organized social structures within informal settlements have facilitated recognition by and influence over the formal city, albeit in incremental and measured ways. Caracas and Rio de Janeiro are especially useful as case studies because through this type of resistance and negotiation, informal settlements have been able to affect large-scale change, such as the aforementioned upgrades. This

82 For example, nightly cleaning services in financial institutions. See Saskia Sassen, "Analytic borderlands : race, gender and representation in the new city", in ed. King, Anthony D., *Re-presenting the city : ethnicity, capital, and culture in the 21st-century metropolis* (New York : New York University Press, 1996) p. 183-2022.

political influence has compelled campaigns to recognize this new market segment, and even, in some cases, the acquisition of legal right to land. This negotiation on social platforms occurs on multiple scales and intimate levels. On a more personal scale, programs to improve the quality of life in informal settlements have achieved moderate successes. For example, in Caracas, programs include *Mission Barrio Adentro*, which brings in Cuban doctors to provide free medical assistance to inhabitants of informal settlements, and ventures like *Las Casas de Alimentacion*, which brings free prepared meals to homes in need. This latter example is also sponsored by the government, which subsidizes supply groceries through local *Mercales*. These shops offer cut-rate food including meat, vegetables and dairy to citizens in these neighborhoods. In each of these examples, the victories that are made by participants of informal urbanism represent the means by which one piece of the urban terrain is confronting yet depending on another seemingly disparate segment, the two creating new relationships and exchanges all the time.

Of course in this analogy, the relationship between the smooth and the striated – the formal and the informal – is multidimensional. Just as the participants of urban informality are negotiating for their space in the city at large, so does the formal often seek to take back or take over those spaces. Thus the histories of land invasion have often been accompanied by periods of creative destruction of slums in the name of progress or of attempts to further marginalize or segregate socially nonconforming people and settlements. These efforts to eliminate informality may never subside, but the way the formal is approaching its counterpart is, in fact, shifting. While efforts to contain and segregate barrios and favelas might provide an alternative preferred to complete slum clearance, they still represent a tactic meant to isolate some people within the larger city and prevent their integration with the dominant center. Thus, efforts that claim to protect citizens from building on unstable land or mitigate continued land invasions as well as ongoing illusions of self-help are part of an ambivalent set of policies and attitudes.

The overlaps and exchanges that exist in the urban fabrics of contemporary hyper-urbanized cities are by no means new. In fact, the conversation and negotiation between the formal and informal are products of, amongst other things, rich historic narratives. For centuries, forces have created an urban terrain in which disparate pieces compete and complement

each other, assembling, disassembling and reassembling in changing relationships. But recent global shifts have magnified these conditions. Thus, events that shaped the physical, political, economic and social landscapes in cities such as Rio and Caracas in the past resonate in the unique urban fabric of today. The competing and changing agendas in Rio de Janeiro have layered attributes from various, contradictory sources in its history; they reflect evolving economic goals and windfalls from interior agriculture and international reach, all molding the spatial character of the city. The more recent past has created the economic niche for luxury beach resorts and also produced the favelas whose residents support them. Similarly, the Torre de David, and Caracas as a whole, illustrates the ways major events through history have created an urban terrain replete with potential for linkage. Like Rocinha, the tower's history includes a lineage of seemingly opposite segments of the city co-opting the same space one after the other. Government strategies such as the economic policy of "sowing oil," the misaligned belief in the strength of the banking system, the downfalls and missteps of successive government structures and the adaptation and need of the people, have created an edifice that more than anything represents the complex character of the contemporary urban terrain.

The relationships between the formal and informal have never been static. Neither has its related scholarship, which has depicted an evolving understanding of slums in spatial, economic and social contexts. In the case of this thesis, based upon a selective reading of Deleuze and Guattari pivots the discourse it offers a new method by which to engage and question the urban terrain, one that focuses on its forces, critically analyzing how they interact, converse, cooperate or antagonize each other, and looking into the socio-spatial expression of those interactions. Thus, while this research does not claim that there is much to learn about the vernacular nature and adaptive quality of informal geographies, it does provide tools that can help understand their role in contemporary cities. Rather than focusing on the competing expressions of the formal and informal as isolated phenomena, it examines them in relation to the forces that are shaping them, much in the way Deleuze and Guattari's analogy of the rhizome subjugates elements within a body to the relationships that exist between them.

This asks future scholars to consider cities through the forces that shape them, addressing their layered interactions over the urban terrain as the heart of the metropolis. This understanding fundamentally shifts away from traditional modes of analysis, requiring urban theory to abandon binaries or dichotomies that attempt to describe socio-spatial expressions in the city. In fact, this thesis argues that these manifestations are fleeting – never static because they are constantly subjected to forces that change them, always transforming and reorganizing at the hands of the exchanges and potentials that exist in new global, hyper-urban cities. Instead, it contends that those energies and relationships must be prioritized in urban analysis, that strategies and tactics must engage them, understand their modus operandi, and advance solutions or approaches that accommodate or account for an unending chain of changing interaction, and a certain level of unpredictability.

The growing acceptance of informal urbanism as expressed in ad-hoc settlements and sub-market economies helps corroborate the claim that these geographies are not anomalous to the urban terrain, but rather a valid and crucial part of it. This is evidenced by government policies that are shifting from eradication to tolerance, accommodation and flexibility. Today, these cities are in a critical phase in their evolution, similar to the ones that Lefebvre noted had taken place between rural and industrial periods or industrial and urban periods. Transitioning between an urban society to one yet whose full character is yet unknown, contemporary cities must recognize and mediate between the disparate pieces of their socio-spatial terrain.

Disassociating "formal" and "informal" from spatial or economic manifestations, enables allows the city to be evaluated as a terrain onto which relationships or potentials between forces, and thus their expressions, are constantly evolving. Urban theory must keep up to appropriately address the world around it. The implication of this thesis is that it is no longer useful to consider socio-spatial or economic aspects of the city as permanent, inert objects, or predictable processes. Instead, the elements that influence and shape the city should be reviewed and engaged, understanding them as the threads that the urban fabric is made of. Constructing a framework that examines the city as a body created from responding and interrelated parts is perhaps a simplification. But this simplification must be accompanied by an important qualifier. This thesis asks scholars to reevaluate the way they examine and discuss the metropolis, to move the debate

from one that is fixated on the socio-spatial expressions of these interrelated parts towards a discussion that includes the amorphous, temporal relations between these forces.

This conversation between forces within the city creates authenticity in the urban condition - a characteristic born from depth, texture and inclusivity. It produces from new spaces in which to negotiate, areas for new theorization, and launching points to perpetuate the evolution and revolution of the metropolis. It is the changing nature of this negotiation – especially that between ostensibly incongruous pieces – that should be understood as the warp and weft that create the urban fabric. The friction that is created between these points become the larger whole, which cannot, however, exist without one challenging the other. The evolution of the urban is dependent on both, an understanding of what the city is requires consideration of how they work together.

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Image 4.9 Bendiksen, Jonas, *Untitled (Baseball in a Caracas barrio).* In The Places We Live, by Jonas Bendiksen (New York: Aperture, 2008). Web. August 2012. http://www.theplaceswelive.com

Image 4.10 Cassel, Lainie, *Untitled (Rapping).* In "Life in the Barrios of Caracas," by Lainie Cassel, *Venezuelanalysis.com*, September 23, 2010. Web. October 2012. http://venezuelanalysis.com/images/5658?b=1

Image 4.11 Bendiksen, Jonas, *Untitled (Twilight in a Caracas barrio).* In The Places We Live, by Jonas Bendiksen (New York: Aperture, 2008). Web. August 2012. http://www.theplaceswelive.com

Image 4.12 Paolini, Pietro, *Untitled (A visit to Mission Barrio Adentro clinic),* in "Chavism," by Pietro Paolini, 2004/2007. Web. August 2012. http://www.terraproject.net/en/photographers/pietro-paolini/chavism

Image 4.13 Lynch, Emma, *Untitled (Mercales*). In "Photo Journal: Life in a Caracas Barrio," by Emma Lynch and Nathalie Malinarich. BBC News. Web. August 2012. http://news.bbc.co.uk/2/shared/spl/hi/picture_gallery/06/in_pictures_life_in_a_caracas_barrio/html/7.stm

Image 4.14 Lynch, Emma, *Untitled (Garbage pile).* In "Photo Journal: Life in a Caracas Barrio," by Emma Lynch and Nathalie Malinarich. BBC News. Web. August 2012. http://news.bbc.co.uk/2/shared/spl/hi/picture_gallery/06/in_pictures_life_in_a_caracas_barrio/html/9.stm

Image 4.15 Paolini, Pietro, *Untitled (Climbing*). In "Chavism," by Pietro Paolini, 2004/2007. Web. August 2012. http://www.terraproject.net/en/photographers/pietro-paolini/chavism

Image 4.16 Artist unknown, *Untitled (Caracas contrast in black and white).* In "Caracas: City of Contrasts," by Andrea Verenini, *Urban + Medic* (blog), July 5, 2010. Web. October 2012. http://urbanmedic.blogspot.com/2010/07/caracas-city-of-

contrasts.html

Image 4.17 same as 4.2 and Kohut, Meredith, *Untitled (Torre de David in Caracas skyline*). In "A 45-Story Walkup Beckons the Desperate," by Simon Romero and Maria Eugenia Diaz. *The New York Times*, February 28, 2011. Web. May 2011. http://www.nytimes.com/2011/03/01/world/americas/01venezuela.html?pagewanted=all&_r=0

Image 4.18 Kohut, Meredith, Untitled (Dangerous situations in Torre de David). In "A 45-Story Walkup Beckons the Desperate," by Simon Romero and Maria Eugenia Diaz. *The New York Times,* February 28, 2011. Web. May 2011. http://www.nytimes.com/2011/03/01/world/americas/01venezuela.html?pagewanted=all&_r=0

Image 4.19 Kohut, Meredith, Untitled (apartment). In "A 45-Story Walkup Beckons the Desperate," by Simon Romero and Maria Eugenia Diaz. *The New York Times*, February 28, 2011. Web. May 2011. http://www.nytimes.com/2011/03/01/world/americas/01venezuela.html?pagewanted=all&_r=0

Image 4.20 Baan, Iwan, *Untitiled (unfinished stairs).* "Torre David/Gran Horizonte," *13th International Architectural Exhibition-la Biennale di Venezia*. August-November 2012. Web. November 2012. http://iwan.com/photo_Venice_Biennale_2012_UTT-Iwan_Baan_Torre_David.php

Image 4.21 Kohut, Meredith, *Untitled (bodega).* In "A 45-Story Walkup Beckons the Desperate," by Simon Romero and Maria Eugenia Diaz. *The New York Times*, February 28, 2011. Web. May 2011. http://www.nytimes.com/2011/03/01/world/americas/01venezuela.html?pagewanted=all&_r=0

Image 4.22 Brillembourg, Alfredo and Hubert Klumpner, *Plan of Torre de David*. In "Torre David/Gran Horizonte," *13th International Architectural Exhibition-la Biennale di Venezia*. August-November 2012. Web. November 2012.

Image 4.23 Baan, Iwan, *Untitiled (Basketball).* In "Torre David/Gran Horizonte," *13th International Architectural Exhibition-la Biennale di Venezia*. August-November 2012. Web. November 2012. http://iwan.com/photo_Venice_Biennale_2012_UTT-Iwan_Baan_Torre_David.php

Image 4.24 Baan, Iwan, *Untitiled (Torre de David community meeting).* "Torre David/Gran Horizonte," *13th International Architectural Exhibition-la Biennale di Venezia.* August-November 2012. Web. November 2012. http://iwan.com/photo_Venice_Biennale_2012_UTT-Iwan_Baan_Torre_David.php

Image 4.25 Baan, Iwan, Untitiled (barber shop). "Torre David/Gran Horizonte," *13th International Architectural Exhibition-la Biennale di Venezia.* August-November 2012. Web. November 2012. http://iwan.com/photo_Venice_Biennale_2012_UTT-Iwan_Baan_Torre_David.php

Image 4.26 Kohut, Meredith, *Untitled (camping in the tower)*. In "A 45-Story Walkup Beckons the Desperate," by Simon Romero and Maria Eugenia Diaz. The New York Times, February 28, 2011. Web. May 2011. http://www.nytimes.com/2011/03/01/world/americas/01venezuela.html?pagewanted=all&_r=0

Image 4.27 Baan, Iwan, *Untitiled (interior courtyard)*. "Torre David/Gran Horizonte," *13th International Architectural Exhibition-la Biennale di Venezia*. August-November 2012. Web. November 2012. http://iwan.com/photo_Venice_Biennale_2012_UTT-Iwan_Baan_Torre_David.php

Image 4.28 *Untitled (scooter on the tower*). In *Torre David: Trailer*, Alfredo Brillembourg, Hubert Klumpner, and the Urban Think-Tank. Posted by Urban Think-Tank. September 2012. http://vimeo.com/49094660