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Informality and the City

Theories, Actions and Interventions

Springer

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Gregory Marinic · Pablo Meninato
Editors

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Foreword

Towards a Practice of Anticipation?

Have you tried to find recent projections of UN-Habitat for global "slum" growth? While at the beginning of the millennium, projections about "slum" growth were issued at three billion "slum" dwellers by 2050,[1] more recent projections cannot be found. While "slums" do not equal informal urbanization, and while I do not use the term myself as it can be derogatory, much of UN-Habitat's five deficiencies that define a "slum" household are congruent with many conditions found in informal urban areas. In that sense, the past projections were helpful to highlight the magnitude of urban dwellers who may have to live in substandard environments in the future. As no new projections on "slum" growth have been issued, one can now find another even more worrisome prognosis in its place: "An estimated 3 billion people will require adequate and affordable housing by 2030."[2] What a simple and brutal statement! One can now muse how this number was collated, how "adequate" and "affordable" are defined, and what the change of wording indicates politically, or perhaps UN-Habitat slowly shifts away from its use? But the number in itself rings clear and loud. If more than half of the projected 5.8 billion urban dwellers by 2030 need "adequate and affordable" housing, and if close to one billion already live in "slum" conditions,[3] we should expect an additional two billion who need better living conditions in the next nine years. This begs the question: *How on earth is humankind going to achieve adequate and affordable living conditions for so many people in such a short time period?*

As this volume indicates, the answer may partially lie in the informal settlements themselves.

The 42 chapters in this book provide the reader with up-to-date, kaleidoscopic insights on informal urbanization and practices across the globe. Commonly held

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[1] https://mirror.unhabitat.org/content.asp?typeid=19&catid=10&cid=928; accessed June 27, 2021.

[2] https://unstats.un.org/sdgs/report/2019/goal-11/; accessed June 27, 2021.

[3] https://unhabitat.org/slum-almanac-2015-2016-0; accessed July 25, 2021.

assumptions are recalibrated, and new perspectives are given. The contributors seek to understand existing informal neighborhoods; they find aspects to learn from, and they are proposing ways to improve them. As life has many forms, this volume proves again that the analysis and retrofitting of informal agglomerations is an extremely complex and multi-layered undertaking; it can fill a life's work of any professional designer. The findings show that there is still a long path to more equity and livability in current and future cities. Many difficult issues are still unsolved: the availability and affordability of buildable land, the achievement of personal safety as a basic condition for healthy living, and more beneficial urban–rural relationships as no city can survive without its hinterland.

But let's look into the future. By studying the existing agglomerations, one must think about the new ones, currently forming under our own eyes. What about the additional two billion people that supposedly will begin living in substandard conditions in the next nine years? Can urban planning as we know it even match this demand? Should we resort to a different type of planning that goes with self-construction flow instead of fighting it? Can the lessons learned from retrofitting informal neighborhoods be applied to planning new neighborhoods, even entire cities?

Many insights in this volume suggest so. Informal practices of city-making and living can be beneficial, maybe even indispensable for planning new neighborhoods. If it is about informal practices of large organizational challenges (Leveratto), growing food (Clouse), surviving under extremely adverse conditions (Rekittke, Abudayyeh), managing risk (Martinelli), and infrastructure (Okyere) to name a few, informal practices are not just makeshift enterprises born out of necessity but show potential avenues for a hybrid city where informal practices can mitigate the limits of formal planning. The challenges of formal planning, its inability to produce livable neighborhoods on a large scale, and its need for transformation have been amply illustrated in this volume (Meninato, Carvalho, Combrinck, Janches, Adria). Developing traits of a much more tactical and malleable urbanism, David Gouverneur's Informal Armatures Approach is probably closest in presenting a hybrid planning model for urban expansions that relies as much on informal as formal actors. We desperately need these sorts of hybrid planning models, as the mere provision of housing to solve housing has failed time and again.

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Acknowledgements

Introduction

Today, over one billion people, amounting to approximately one out of every seven, live in informal settlements across the globe. Although this number sounds incomprehensible, current projections show that these communities will continue to expand, so that by 2050, over three billion people worldwide will reside in informal settlements. Although informal urbanization has become a global priority in recent years, contemporary urban informality traces its origins to the 1950s when cities in the Global South began experiencing unprecedented migrations of poor rural people moving to metropolitan peripheries. These marginal urban configurations developed rapidly and spontaneously without planning, infrastructure, and public services. Despite overcrowding and extreme poverty, informal settlements offered rural migrants greater access to employment, education, healthcare, public transit, and a better life in cities.

Throughout the post-World War II years, and often in tandem with post-colonial nation-building, many governments viewed informal settlements as a problem that could be solved by modernist master planning and social housing. Most countries in the Global South lacked the economic resources and political will to halt flows or to improve conditions. Likewise, there was a rising awareness that tabula rasa efforts would never succeed in curtailing the housing crisis. By the 1980s, the impact of urban migration on metropolitan peripheries began to be reassessed within planning and architectural discourse, while at the same time, modernist social housing and planning dogmas were increasingly questioned. Many planners, architects, geographers, sociologists, and theorists concluded that the solution to informal urbanization lay not in its eradication, but through infrastructure and tactical interventions that could incrementally improve living standards.

Informality and the City

The question of "the informal" discussed herein demands a preliminary definition of the term. The Merriam-Webster Dictionary states that the word "informal" connotes something "marked by the absence of formality or ceremony." The prefix

"in-", according to this definition, implies the opposite of formality, or that which has a precise and identifiable form. In the traditional context of architecture and urbanism, "informal" is assumed to be the absence of planning or design. It responds to neither the guidelines of a master plan nor a building architecture. Informal urbanism, therefore, is understood as inherently ad hoc, spontaneous, improvisational, and oftentimes, substandard. This reasoning, largely a societal bias, equates informal development with an absence of value. Even so, a survey of historical urban development patterns points to far different interpretations and understandings of informality. Medieval cities, for instance, are prototypical examples of informal or unplanned urbanism. These places demonstrate the timeless aesthetic and scalar qualities of vernacular buildings, as well as the vibrant publicness of organically formed communal spaces.

The relationship between right to the city and processes of informal urbanization varies widely across diverse social, political, and cultural geographies. Urban informality is most typically cast as a struggle between exclusion and opportunity. On the one hand, informal urban development is widely viewed as the result of autocratic regimes, longstanding oligarchies, and ineffectual bureaucracies that breed widespread exclusion and poverty. On the other, urban informality incrementally makes space for autonomy, entrepreneurship, and mobility. Furthermore, many countries in the Global South are historically fragile or emerging democracies. The legitimacy of their governments rests largely upon an ability to support millions who are excluded from social, political, and economic power structures.

Exclusion from the formal structures of society has profound implications on ecology and the built environment. Those who are excluded from formal housing and employment often resort to building their own city—a parallel city, the other city—a self-built community conceived by and for themselves within precarious territories. These settlements are typically characterized by their inadequate infrastructure, insecure land tenure, and lack of basic services. Over time, such informal urban morphologies can evolve into more robust and livable, in fact, more formalized places through consolidation, political enfranchisement, and upgrading.

While informal settlements offer many valuable qualities, it should be noted that acknowledging the positive aspects of these communities, such as carbon footprint performance and access to urban resources, does not constitute an argument for justifying or tolerating substandard living conditions. Advocacy does not assume a romantic vision of informal settlements. Rather, advocacy should promote fundamental human rights with the conviction that people should not live under such inhumane circumstances. It acknowledges that although the procedures and phenomena of informal urbanism occur outside of conventional processes or planned initiatives, informality makes space for liminal practices and positive change. Advocates include diverse actors including residents, sociologists, geographers, policymakers, planners, architects, urban designers, landscape architects, stakeholders, and others who collectively envision improvements to policy, infrastructure, urban design, housing, and other priorities through intersectional practices.

Although diverse variants of informal urbanism have existed throughout human history, only in recent years have scholars and practitioners critically engaged the

complexities and potentialities of this continually emergent phenomenon. Their inquiries have made it abundantly clear that the informal city requires transnational and multidisciplinary approaches that radically depart from normative practices in policy, planning, architecture, and urban design. Long-standing assumptions surrounding development—such as the need for conventional financing, legal frameworks, professional practitioners, and precision—are strikingly absent. Here, such parameters appear to be insignificant or marginalized.

Environmental degradation and climate change are central challenges of the twenty-first century. The ways in which these priorities intersect with urban socioeconomic geographies compels scholars, practitioners, and governments to better understand informal settlements and to develop strategies for their improvement. The diverse perspectives in this book frame a renewed understanding of informality by collectively asking: *A city for and by whom?* This question frames a discourse surrounding social justice for marginalized communities in ways that seek to improve their daily lives and futures. Advocating for the informal city, therefore, requires new tactics that achieve jurisdictional fluidity through participatory practices engaging residents with governmental bodies and practitioners.

Theories, Actions, Interventions

Among the many disciplinary views on informality, two general fields can be identified. On the one hand, those scholars who study the social, political, geographic, ecological, and cultural conditions of settlements including, but not limited to sociologists, geographers, anthropologists, social workers, and psychologists. On the other, those theorists and practitioners who concentrate on the physical transformation of the built environment, primarily, but not exclusively within the disciplines of architecture, planning, urban design, and landscape architecture. For both groups, theories, actions, and interventions form the core attributes and modus operandi of contemporary practices in the informal city. These provocations served as catalysts for developing this book in which a global range of voices seek authentically transdisciplinary ways of seeing, thinking, working, and making. Authors have situated their ideas through the conviction that informal settlements, particularly those in the Global South, "are here to stay" as their erasure would be fundamentally harmful to residents. Individual chapters investigate the relationship between formality and informality by exploring contradictions in duality, as well as emerging potentials for enhanced interaction.

Shaping a renewed understanding of the informal city through new scholarship, methods, planning approaches, tactics, and implementation strategies, this book views resituates design in relation to the informal built environment. As such, urban design—rooted in its commitment to publicness and spatial multiplicity—acts as a central mechanism that networks singular, episodic constructs into larger urban systems. Through this lens, our book advocates for social justice by demonstrating ways of thinking and working that improve quality of life now and in the future.

Turning away from dichotomies, this compilation focuses on ideas and current practices that blend both conditions. Authors highlight the ways in which informality reacts to normativity by establishing autonomous rules for settlement, building, governance, and growth.

This book includes 42 chapters that examine, analyze, and theorize the informal city to postulate on its past, present, and future. It begins and ends with broad insights provided by globally renowned scholars in the field. The *Foreword* was scribed by Christiann Werthmann, Coordinator of the UN Habitat Informal Urbanism Hub and Professor of Landscape Architecture and Design at Leibniz University Hannover. The *Afterword* was written by Miquel Adrià, a Mexico City-based architect, Dean of the Graduate School of Architecture at CENTRO, and Editor of *Arquine* magazine. Chapter authors investigate the spatial, social, cultural, contextual, theoretical, and design parameters of informal urbanism. Together, their work illustrates a transdisciplinary and global survey of informal characteristics and practices connected to architecture, urbanism, landscapes, and the social sciences across Europe, Africa, Asia, and the Americas.

The Geography of Informality

Informal urbanism is a transnational phenomenon that shapes vast territories across the Global South, while blurring itself into more nuanced manifestations throughout the Global North. After considering various organizational scenarios for this book, we have geographically structured it into five parts. Part I, *Informalities—An Overview*, is a collection of essays that reflect on the question of informality in relation to contemporary urbanism and architecture across continents. Chapters in this part analyze and theorize one of the most pressing problems impacting humankind, as well as how design of the built environment can contribute to alleviating such challenges. Authors demonstrate that informal urbanization is not solely confined to the Global South. As shifting scholarly debates surrounding informal urbanization coincide with increasing globalization, pluralism, migration, and ecological decline, informal urbanism in the Global South has become a platform for people in the Global North to gain insight into tactical, everyday, and DIY design practices.

Part II is dedicated to Latin America, arguably considered global "ground zero" for developing intervention strategies in informal settlements, and focuses on the impact of upgrading tactics in various cities across the region. While the "Favela-Barrio" program in Rio de Janeiro and "Social Urbanism" initiative in Medellin are widely known projects in Latin America (authors associated to both programs have contributed to this book), this part expands the range to include cities including Buenos Aires, São Paulo, Guatemala City, Caracas, and Havana. Because Latin America remains the most unequal region in the world, these initiatives should be taken as first steps toward achieving a more just and inclusive society.

Part III focuses on the US-Mexico Borderlands, where migration and informality intersect with poverty and contentious political developments. The US-Mexico

border has become a place of refuge for people fleeing from violence, unemployment, and the impact of climate change in various regions of the Western Hemisphere. Reacting to this humanitarian crisis, many US politicians and pundits have resigned the words "border" and "wall" as dog whistles of discrimination, xenophobia, and racial intolerance. Subjects in this part, ranging from self-build initiatives in Tijuana to the informal housing crisis in the Mississippi Delta, discuss the intricacies and complexities of a region marked by rising geopolitical tensions.

Part IV casts its lens on Asia, a continent simultaneously experiencing intense migration from the countryside to urban centers, as well as an unprecedented exodus of people leaving war-torn countries bound for refugee encampments. Case studies of informal urbanism in Bandung and Jakarta, Indonesia; Yazd, Iran; Kathmandu, Nepal; and various cities in India demonstrate the originality and resilience of designers and activists across the region.

This part also examines the current migrant crisis in the Mediterranean Basin, where Syrian refugees escaping civil war are trapped in informal encampments on the Island of Lesvos, Greece. The migrant situation offers few signs of hope for a region already impacted by acute and prolonged urban, demographic, economic, and political crises.

Part V surveys the continent of Africa, a region where rates of rural-to-urban migration are reaching record highs. Thus, large numbers of people are moving into informal settlements with neither basic infrastructure nor access to critical resources. This critical situation has catalyzed planners, architects, designers, activists, and stakeholders to develop alternative upgrading approaches across the continent. Community interventions in Cairo, micro-infrastructural initiatives in Accra, and civic architecture in Cape Town are among the tactics that positively transform quality of life in informal settlements.

As urbanization continues to expand across the globe, issues such as climate change, mass migration, inequality, and informal settlements will continue to impact millions of people. Among these, the growth of informal settlements is most clearly manifested in physical and spatial terms. As editors of this book, we contend that the knowledge and assessment of the informal city should be a holistic enterprise demanding the involvement of many disciplines and intersectional perspectives. This book attests to that interdisciplinary and collaborative vision. We hope that *Informality and the City* will facilitate a better understanding of the complexities surrounding one of the most critical phenomena of our time.

Buenos Aires, Argentina   Gregory Marinic
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Gregory Marinic, Ph.D. is Associate Professor in the University of Cincinnati College of Design, Architecture, Art, and Planning SAID and Director of URBANIA, a grant-funded research lab speculating on urban futures. His field research is currently based in Mexico City, Buenos Aires, Santiago de Chile, and Guayaquil where it focuses on housing, urban design, and morphology of informal settlements. Marinic holds over twenty years of experience in professional practice. Prior to academia, he worked in architecture firms in New York and London including Rafael Viñoly Architects, Gensler, Tsao & McKown, and Yoshihara McKee. He is founding principal of Arquipelago, a New York-based architecture practice that has been awarded by the American Institute of Architects, Association of Collegiate Schools of Architecture, and Seoul Metropolitan Government, as well as exhibited worldwide in New York, Philadelphia, Washington, Toronto, Tallinn, Seoul, Ankara, and elsewhere.

Pablo Meninato, Ph.D. is an architect, architectural critic, and educator whose research focuses on the principles and mechanisms governing the architectural and urban project. A native of Argentina, Meninato has taught and practiced architecture in Philadelphia, Buenos Aires, and Monterrey, Mexico. Before joining Temple University as Associate Professor, Meninato taught in various academic institutions including the University of Pennsylvania, Thomas Jefferson University, Universidad de Monterrey, Universidad de Palermo, and Universidad de Belgrano in Buenos Aires. He is the author of *Unexpected Affinities: The History of Type in the Architectural Project from Laugier to Duchamp* (Routledge, 2018), a book that reassesses the concept of architectural "type" and its impact on the design process.

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Part I
Informalities—An Overview

Chapter 1
Everything but Housing

Pablo Meninato

Abstract At the beginning of the twentieth century, housing came to occupy a prominent place in the development of modern architecture and urbanism. For the first time in history, the most renowned architects and planners began focusing on the dwelling needs of the most disenfranchised segments of society. Housing rapidly became the typology that most clearly represented the social agenda of modern architecture. However, starting in the 1960s, numerous housing projects began to be rejected and denounced around the world. During this period, John Turner began developing a radically new idea of public interest architecture through his interventions in the informal settlements of Lima, Peru. Rather than proposing new residential buildings, Turner argued that the architect should support and promote self-constructed dwelling initiatives carried out by the inhabitants themselves. In turn, upgrading efforts should focus on developing new infrastructure, urban spaces, and civic buildings. Turner's theories were later adapted and expanded in programs such as the "Favela-Bairro" in Rio de Janeiro and "Social Urbanism" in Medellín, indicating a paradigm shift for social interest projects in Latin America. Once emblematic of modernism's socially driven architecture, housing interventions became an important feature of informal settlements across the region. Recent developments, however, display the notion of social housing paradigms redefined by participatory frameworks and incremental design processes. If informal settlement growth remains the Global South's most urgent urban challenge, the question is, what role should social housing play?

Keywords Informality · Housing · Urbanism · Latin America · Self-built

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The only way of reversing the present deterioration of housing and the collapse of viable urban development is for governments to redirect their relatively scarce resources away from the conventional, and now discredited, closed housing projects.

John F. C. Turner.[1]

Much has been written about the influence of modernism on the development of twentieth-century architecture in Latin America. From Le Corbusier's "proselytizing" trip to Buenos Aires, Montevideo, and Rio de Janeiro in 1929 to the avant-garde presence of the ex-Bauhaus Marcel Breuer in Argentina during the 1940s; from José Luis Sert's urban plans for Medellín and Bogotá in the early 1950s to Le Corbusier's "sponsorship" of Lucio Costa's 1957 Pilot Plan for Brasilia—architecture and urbanism in Latin America have been profoundly marked by modernist principles. Throughout the process of propagation and acceptance of modernist ideals in Latin America, the building type that best embodied this trend was housing. These ideals were reinforced in the 1950s, when many countries began experiencing a period of industrial development that provoked an intense and continual migration from rural areas to cities. Most governments addressed this question with massive efforts to construct social housing blocks for millions of migrants.

Collective housing for low-income populations has had a conflicted history in Latin America.[2] The migratory masses that arrived in urban areas continually exceeded the housing supply; despite the large number of units built, the demand was never met. This problem was also evident in Brasilia, the planned modern capital city of Brazil. Its master plan incorporated numerous housing complexes—of which the *superquadras* by Lucio Costa remain the most iconic—but soon after its inauguration, Brasilia witnessed the emergence of informal neighborhoods on its periphery, a process that continues until today.[3]

The other problem with collective housing in Latin America was that it quickly developed a bad reputation for its low architectural and urban qualities.[4] This reputation was earned by the meager budgets allocated for construction, and at the same time, no funds or strategies were foreseen for building maintenance. Furthermore, a disconnect between the socio-spatial qualities of these projects and the customs of the residents soon became evident. In his historical overview of the built environment in Latin America, historian Roberto Segre described the difficulties and contradictions of imposing European modernist residential typologies on a Latin American social fabric:

> Those urban and architectural typologies have failed due to the contradiction between the formulated hypotheses and the real parameters of the prevailing context. The typological models derived from planimetric solutions, from the cell to the building block—in most cases imported from European models—have been criticized for corresponding to habits and customs distinctively different from local ones.[5]

The principal model of collective housing in Latin America was the tower-in-a-park concept by Le Corbusier. Envisaged in the 1920s and early 30s, the *Ville Contemporaine* and the *Ville Radieuse* consisted of large apartment towers surrounded by green spaces. As long as the buildings did not anticipate the presence of commercial

or social activities on their ground-level floors, these "green" areas became "non-places,"[6] or in Stephen Petersen's words, "anti-spaces."[7] Many housing projects provoked resistance from residents, who in most cases were not consulted during the design process; the built designs did not consider relevant cultural, climatic, and social conditions. Large-scale complexes, such as the Caracas *superbloques* by the Architectural Office of the Banco Obrero (TABO)[8] or the *Barrio Villa Soldati* housing towers by Estudio STAFF in Buenos Aires, only confirmed and reinforced the stigma associated with social housing in Latin America.[9]

Under Turner's Shadow

Traditionally, the disciplines of architecture and urban planning did not recognize informal settlements as a problem worthy of attention.[10] During much of the twentieth century, the preferred "solution" of modern architects, planners, and governments was to eradicate the shantytowns or slums. The potential for a "tabula rasa," so ingrained within the ideals of modernity, became the preferred strategy for addressing informality in the urban peripheries of Latin American cities. One of the main forces to challenge this approach was John Turner, an English architect and graduate of the Architectural Association, who during the late 1950s and 1960s developed intervention strategies in the informal shantytowns around Lima, Peru.[11] Turner prioritized the rehabilitation of existing urban conditions through securing land tenure, self-construction, and participatory design strategies. These observations led him to view the *barriadas*—informal settlements often initiated by squatting or land invasion—as a resource rather than a problem. Turner's view can be summarized by his often-quoted comment, made after visiting favelas and social housing projects in Rio de Janeiro in the 1960s: "You have shown me problems that are solutions and solutions that are problems."[12]

It was after observing processes of self-construction in the slums of Lima that Turner developed a positive interpretation of informal settlements. Rather than reinforcing a stigmatizing narrative of shantytowns, Turner praised their inherent intelligence and wisdom—or as geographer Richard Harris would say, "the rationality of the poor."[13] The inhabitants of the settlements, Turner asserted, understood better than anyone their own needs; they knew best the daily rituals associated with their traditions, habits, and customs. Therefore, instead of proposing the eradication of settlements, architects and planners could offer improvements to urban layouts supporting and underpinning processes of securing land tenure, self-organization, self-management, and self-construction.

Turner observed that housing in informal settlements is built over time, and thus, it is never considered a finished product. Instead, it should be seen as a process that allows alterations and transformations according to the needs, possibilities, and desires of its inhabitants. Understanding processes of self-construction in the *barriadas* of Lima, therefore, requires a consideration of time fundamentally different

from conventional architectural processes. "When dwellers control the major decisions," reasoned Turner, "and are free to make their own contribution to the design, construction, or management of their housing, these processes and the environment that is produced stimulate individual and social well-being."[14]

Housing, Definitively Unfinished

While Turner's ideas and case studies regarding bottom-up policies drew the attention of economists and international organizations such as USAID and the Inter-American Development Bank,[15] most of his peers—architects and planners of the 1960s—considered his theories and proposals marginal and even quixotic, closer to voluntarism and social activism than to disciplinary practices and conventions.[16] More recently, however, the discourse of urban, architectural, and landscape design has intensely reconsidered and valorized Turner's ideas and theories.[17] One area where his influence is most evident is the affordable housing projects of various architects and designers including Estudio Teddy Cruz-Fonna Forman, Tatiana Bilbao, and Alejandro Aravena, who develop innovative design strategies that integrate incremental and participatory processes.

Indeed, much of the work and ideas of architect Teddy Cruz and political scientist Fonna Forman focuses on integrating formal and informal processes. Their work oscillates between design and politics, community initiatives and governmental advising, research and teaching, and academic and professional projects. Their geographical location in the US–Mexico Borderlands reaffirms this condition of hybridity as they mostly act in San Diego–Tijuana region. This metropolitan area forms part of a border dividing the Global South and Global North or the developing and developed worlds.[18]

An example of combining planned and unplanned processes is their mixed-use complex "Casa Familiar," (later renamed "UCSD-Casa Community Station") a community-based NGO in San Ysidro, a neighborhood of San Diego.[19] The project reminds one of a miniature city with slivers acting as streets and an array of structures and pavilions anchoring diverse activities and uses. Its center is a historical church that has been retrofitted into a community theater with an outdoor stage. One side facing the street has a series of open frame structures hosting varying activities and uses depending on the hour and day of the week (Figs. 1.1 and 1.2). Following these premises, the notion of affordable housing takes on a different dimension to deliberately promote participatory process, variations, changes of use, and self-construction over repetition and standardization. "We must rethink affordable housing," Cruz and Forman conclude, "from autonomous units into relational social systems."[20]

Another approach that procures the assimilation of formal and informal design practices is Tatiana Bilbao's *$8000 house*. The project is conceived as an ensemble of modules that allow houses to be expanded, customized, and transformed by their future residents.[21] Since the project was designed to be realized in different regions in

Fig. 1.1 Cruz + Forman, San Ysidro, CA. *Photos* Pablo Meninato

Fig. 1.2 Casa familiar. San Ysidro, CA. *Photos* Pablo Meninato

Mexico, the architects proposed prototype variations for specific cultural, geographical, and climatic conditions. For Chiapas, a region with a very hot climate, the kitchen is defined as a semi-detached volume positioned at the edge of the main structure. For the Northern state of Chihuahua, where the winters can be very cold, the kitchen is set at the core of the house. In her projects and writings, Bilbao challenges the notion of the single-functionality of spaces, one of the central principles of modernism.[22] This idea is advanced in her study of the contemporary house, *Room by Room*, co-written with Ayesha Gosh and included herein, in which they discuss how each room of a house can be used in different and seemingly unexpected ways. They note that we often eat in our bedrooms, work in the dining room, and find children playing in the kitchen.

Perhaps the contemporary architect who most clearly articulates the overlapping formal and informal processes in social housing is Alejandro Aravena, recipient of the 2016 Pritzker Architecture Prize and principal of the architectural firm Elemental. Among his most well-known affordable housing projects is Quinta Monroy in Iquique, conceived as an incremental design strategy labeled "the half house." The project (or process) consists of designing and building the half of a house a family would not be able to do by themselves—namely the structure, roof, kitchen, and bathroom. The "other" half, which may contain an additional bedroom, a second bathroom, or a small workshop, is left to be realized later by the owners according to their needs.

The innovative design strategies developed by these Latin American architects introduce alternative tactics to address the question of affordable housing. Departing from the most entrenched disciplinary traditions—where there is a clear distinction between design and construction—the discussed initiatives redefine the realization of a "hybrid" architectural project, integrating conventional design and construction practices with community participation and self-build processes. Rather than passive actors, residents become vital agents in the decision-making process and improvement of their dwellings.

Sidelining Housing: The Cases of Rio de Janeiro and Medellín

While the design originality and boldness of the discussed projects should be highlighted, the limitations of such initiatives should also be recognized. Considering that millions of people live in precarious conditions in Latin American cities, proposals for building dozens—or even hundreds—of residential units will have minimal impact on solving the question of housing in informal settlements. Furthermore, when developing new housing for people living in informal settlements, what should be done with the existing settlements? Even if they are in poor condition, experience tells us that slum clearance and relocation of their populations can be a complicated and traumatic process. As John Turner pointed out, rather than a completed product, housing

in slums should be considered a process developed over an extended period of time. In many cases, although the initial constructions in slums are inevitably precarious, over the years, owners realize successive improvements and transformations of their homes. Such is the case in the Popular and Andalucía barrios of Medellin, the favela Rocinha in Rio de Janeiro, and the Villa 31 in Buenos Aires. While they all started as precarious housing, decades later they appear to be consolidated middle-class dwellings.

Partially influenced by John Turner's theories, starting in the 1990s, some Latin American architects began developing large-scale upgrading initiatives.[23] Though while Turner's experience in Lima faced limited funding and minimal support from governmental authorities, cities such as Rio de Janeiro, Medellin, Bogota, São Paulo, and Buenos Aires initiated programs with strong municipal, federal, and sometimes even international support, allowing the development of ambitious and far-reaching projects.[24] A common factor of those slum-upgrading proposals is that, departing from modern urbanism doctrine, housing ceased to be the principal and determining component. Instead, the priority was placed on developing new infrastructure, creating new public spaces and playgrounds, and introducing new civic-oriented buildings such as schools, sports facilities, and community centers.

Two cases that fall into this category are the "Favela-Bairro" program in Rio de Janeiro, and the so-called social urbanism in Medellín. The "Favela-Bairro" (literally slum-neighborhood) informal settlement upgrading program was created in Rio de Janeiro in the 1990s as an initiative advanced by its mayor, Luiz Paulo Conde, with financial support from the Inter-American Development Bank. Its successor was the Programa de Aceleração do Crescimento (Growth Acceleration Program) "PAC I" and "PAC II."[25] One of the main architects of the "Favela-Bairro" and the PAC programs was Jorge Mario Jáuregui, who led interventions in several favelas of Rio de Janeiro such as Rio das Pedras, Salgueiro, Alemão, Manguinhos, and Rocinha.[26] Influenced by Turner's ideas, a distinctive feature of Jauregui's interventions was that rather than focusing exclusively on building new housing, the main objective was to enhance the quality of life in informal settlements through improvements to infrastructure and transportation, as well as the creation of new urban spaces.[27] These spaces included pocket parks, public squares, and soccer fields, as well as buildings with community-oriented facilities such as schools, community centers, sports centers, and health clinics (Figs. 1.3 and 1.4).[28]

A difficult challenge when developing intervention projects in favelas is to foresee how changes in governing administrations and political parties will affect the ongoing processes. Following the unjust and incomprehensible impeachment process that removed Brazil's president Dilma Rousseff in 2016, Michel Temer and Jair Bolsonaro's administrations canceled most ongoing slum-upgrading programs and reduced or removed the funding for maintenance of "Favela-Bairro" and PAC-completed works.[29]

Fortunately, the Medellín experience has been quite different. A key distinction was that—despite subsequent changes in administrations and ruling political parties—the processes of upgrading informal settlements continued. To this day, new works continue to be developed, and the maintenance of the projects is carried

Fig. 1.3 Jorge Jauregui. *Photos* Jorge Jauregui

out (I had the opportunity to visit the city in August 2019).[30] While all urban projects are by definition collective, in the case of Medellín, it is possible to identify the leadership of Sergio Fajardo and Alejandro Echeverri. Sergio Fajardo was the political engine of the process, first serving as mayor of the city for two terms (2004–08 and 2008–12) and then as governor of Antioquia (2012–16). Fajardo appointed Alejandro Echeverri as Director of the Urban Development Company (EDU), which put him in charge of advancing and coordinating all urban projects in the city. Upon his nomination, Alejandro Echeverri, a renowned architect and academic, had recently returned from Barcelona where he had completed his doctoral studies in Urbanism and Territorial Planning at Escola Tecnica Superior de Arquitectura.

One of Fajardo's campaign slogans, and later a vital political principle, was that the city should be "paying off the historical debt to forgotten areas."[31] In other words, the promise was to improve the living conditions of the people living in Medellín's informal settlements. Echeverri, together with his team, conceived of an interdisciplinary urban strategy for transforming the informal settlements labeled "Proyecto Urbano Integral" (Strategic Urban Project), or PUI, defined as "an instrument of planning and physical intervention in zones characterized by high indices of marginality, segregation, poverty, and crime."[32] The first PUI centered in the *Comuna Noreste* (Northeastern Commune), an area with high levels of marginality and poverty, lack of public spaces, civic buildings, and social services, as well as one of the oldest informal settlements in Medellín. An additional and unique factor was that a new *metrocable* (cable car) had recently been installed in the Northeastern Commune, an

Fig. 1.4 Fubá campinho community center. *Photos* Jorge Jauregui

efficient and affordable mode of mobility connecting the high slopes of the settlement with the metropolitan transit network.

The Northeastern Commune Strategic Urban Project consisted of mass transit and mobility improvements including completion of the Andalucía, Popular, and Santo Domingo metrocable stations: public spaces, playgrounds, sports fields, and numerous public buildings such as the España–Library-Park, Santo Domingo School, Granizal Sports Center and the Center for Entrepreneurial Development Zone (CEDEZCO). It is interesting to note that, like the "Favela-bairro" program and echoing John Turner's ideas, these interventions included virtually no new housing. One exception—in the Juan Bobo Ravine—was the forced relocation of inhabitants living in houses nearing collapse to new residential complexes.[33]

In a 2010 interview after receiving the Curry Stone Design Grand Prize award, Medellín's Mayor Sergio Fajardo stated that "architecture is very powerful because it means social transformation."[34] A tour through Medellín demonstrates the importance of architecture in urban regeneration. Viewing the barrios from a metrocable aerial tram, each of the new buildings—whether a school, library, park, or UVA center—conveys the intentionality of each intervention. Individual buildings, placed throughout the barrios, can be interpreted as islands of formality floating within an ocean of informality (Figs. 1.5 and 1.6). The city, therefore, can be viewed as a sort of archipelago of architectural nodes scattered within an extensive urban fabric of shantytowns, each new building acting as a catalyst for the needs and aspirations of the community (Fig. 1.7).

Conclusion

If we compare most social interest projects during modernism's heyday in Latin America, roughly the 1930s–1980s, with the interventions led by Jáuregui in Rio de Janeiro and Echeverri in Medellín, a remarkable development has been the changing attitude toward housing. Except for a few specific situations—such as the unexpected availability of a large plot of land in the Rocinha favela of Rio de Janeiro, where Jáuregui designed a housing complex; or the forced relocation of residents due to mudslides and erosion in the Juan Bobo Ravine of Medellín—the informal settlement improvement programs in Rio de Janeiro and Medellín have barely addressed housing.[35]

This does not mean that the question of social housing should not be addressed. As discussed, the initiatives advanced by Elemental, Tatiana Bilbao Estudio, and Estudio Teddy Cruz-Fonna Forman demonstrate the potential of reassessing affordable housing under the spectrum of participatory and self-construction processes. A key question asks to what extent can these innovative housing approaches change the situation of millions of people currently living in the informal settlements in Latin America? The experience of the "favela-bairro" and "social urbanism" programs suggests a clear path. Rather than developing collective housing, the priority when

Fig. 1.5 Comuna popular, Medellín. *Photo* Pablo Meninato

Fig. 1.6 Playground in Comuna popular, Medellín. *Photo* Pablo Meninato

Fig. 1.7 UVA de la Esperanza, San Pablo, Medellín. *Photo* Pablo Meninato

upgrading informal settlements should be placed on creating—by means of participatory processes—good quality urban spaces, civic buildings, and infrastructure that improves living conditions for the entire community.

Implicitly or explicitly, this strategy has been adopted by most architects and urbanists currently working on upgrading projects in Latin America. Among the most well-known cases—several of whom are contributors to this book—include Fernando de Mello Franco,[36] leader of the upgrade program for the favelas in São Paulo; Javier Fernández Castro,[37] responsible for the transformation of the Villa 31 Carlos Mugica in Buenos Aires; and Flavio Janches, the leading architect for the intervention in Villa Tranquila in Avellaneda near Buenos Aires.[38] This situation indicates a genuine *paradigm shift*, a critical departure from modernism's architectural and urban doctrines when housing was the focus of social interest projects. Certainly, the ambition of any society should be to provide adequate housing for all. Still, the conflict-rife politics and economic realities of Latin America suggest that this ideal, *here and now*, is impossible to achieve. By focusing on public and community-oriented initiatives, a new generation of Latin American architects are developing informal settlement interventions that effectively improve the quality of life for all.

Endnotes

1. Turner, John F. C., *Freedom to build; dweller control of the housing process.* New York: Macmillan, 1972, 173.

2. As stated in the 2016 report by the Inter-American Development Bank, "Massive low-income housing programs have often produced poor-quality, badly located housing, fueling urban sprawl." See Fernanda Magalhães, Editor, *Slum Upgrading and Housing in Latin America.* Inter-American Development Bank, 2016, 110.

3. For an overview of the irruption of slums in Brasilia, see Brooks, Bradley, "THE WORLD; Hope and misery live side by side in Brazil's capital; Fifty years after its inauguration, Brasilia is a gleaming modern city surrounded by massive slums." *Los Angeles Times*; 25 Apr 2010.

4. For an overview of the history of modern housing, see Montaner, Josep Maria, *La Arquitectura de la Vivienda Colectiva: Políticas y Proyectos en la Ciudad Contemporánea*, Reverté: Barcelona, Spain, 2015.

5. Segre, Roberto, *Tres décadas de reflexiones sobre el hábitat latinoamericano.* Universidad Nacional de Colombia, 2005, 185 (translated by the author).

6. Marc Augé famously introduced the notion of the "non-place," understood as spaces where no organic social life is possible. See Augé, Marc, *Non-places: Introduction to an Anthropology of Supermodernity.* Verso, 1995.

7. Petersen, Stephen Kent, "Space and Anti-Space," *Harvard Architecture Review: Beyond the Modern Movement.* Cambridge MA, MIT Press, 1980, 89-113.

8. For a detailed overview and analysis of the residential towers designed by the Architectural Office of the Banco Obrero (TABO) in Caracas, see d'Auria,

Viviana, "Caracas' Cultural [Be]longings: Retracing the Troubled Trajectories of the Superbloque Experiment," in del Real, Patricio and Helen Gyger, *Latin American Modern Architectures: Ambiguous Territories*, Routledge 2013, 115–134.

9. In a 2019 interview with Argentine newspaper La Nación, Olga Wainstein, one of the principals of Estudio STAFF, firm responsible for the project Barrio Villa Soldati (nicknamed "Fuerte Apache"), commented that "the design of these type of social housing was a mistake." See https://www.lanacion.com.ar/lifestyle/fuerte-apache-y-soldati-el-diseno-de-ese-tipo-de-vivienda-social-fue-un-error-nid2258828/; accessed Feb 15, 2021.

10. Richard Harris is among the few thinkers attempting to develop a history of self-help housing practices and informal urbanism. See Harris, Richard, "Slipping through the Cracks: The Origins of Aided Self-help Housing, 1918–53. *Housing Studies*, Vol 14, No 3, 1999, 381–309.

11. Peter Ward commented on the 1960s "paradigm shift," when various academics and practitioners in the urban fields started rejecting large-scale, social housing buildings and instead favoring self-built, bottom-up approaches. The most representative figure of this trend, according to Ward, was John Turner. See Peter M. Ward, "Self-Help Housing Ideas and Practice in the Americas," 283–306, in Bishwapriya Sanyal et al. (eds), *Planning Ideas That Matter. Livability, Territoriality, Governance, and Reflective Practice.* Cambridge, MA, MIT Press, 2012.

12. Quoted in https://www.domusweb.it/en/architecture/gallery/2020/03/10/what-we-learned-from-john-f-c-turner-about-the-informal-city.html; accessed Feb 11, 2021.

13. I am referring to the section titled "Squatter settlements and the rationality of the poor," in Richard Harris, "A double irony: the originality and influence of John F. C. Turner," *Habitat International 27*, 2003 245–269.

14. Turner, John F. C., *Freedom to build; dweller control of the housing process.* New York: Macmillan, 1972, 6.

15. Cohen, Michael. "John F. C. Turner and Housing as a Verb." *Built Environment 41, No. 3*, 2015, 414; http://www.jstor.org/stable/44131925; accessed February 10, 2021.

16. For an overview of the contemporaries' reaction to John Turner's ideas and works, see "Introduction," in Gyger, Helen, *Improvised Cities*: *Architecture, Urbanization, and Innovation in Peru.* University of Pittsburgh Press, 2019.

17. For an overview of Turner's life, ideas, and works, see Harris, Richard, "A double irony: the originality and influence of John F. C. Turner*," Habitat International 27*, 2003, 245–69.

18. In *Radical Cities*, Justin McGuirk describes the San Diego–Tijuana region as a hinge between the Global North and South. See McGuirk, Justin, *Radical Cities: Across Latin America in Search of a New Architecture.* Verso Books, 2014, 261–262.

19. For a description of this project, see Lepik, Andres, Bergdoll, Barry, "Casa Familiar: Living rooms at the border and Senior Housing with Childcare," in *Small Scale, Big Change: New Architectures of Social Engagement.* The Museum of Modern Art, New York, N.Y., 2010, 93–94.

20. Lecture by Teddy Cruz and Fonna Forman at Columbia University's GSAPP, Feb 22, 2021; https://www.youtube.com/watch?v=wi-LsPvRIGc; accessed March 5, 2021.

21. INHABITAT, "Tatiana Bilbao's $8000 house could help solve Mexico's social housing shortage," November 9, 2015, https://inhabitat.com/tatiana-bilbaos-8000-house-could-help-solve-mexicos-social-housing-shortage/; accessed February 3, 2021.

22. Towards the end of a lecture at GSD, Tatiana Bilbao explained in great detail the process and conditions for designing the $8000 house prototype. See https://www.youtube.com/watch?v=OSr6V2zhGUg&t=3218s, accessed February 11, 2021.

23. For an analysis of the influence of John Turner ideas in last decades' global and Latin American architecture and urbanism, see Richard Harris article "A double irony: the originality and influence of John F. C. Turner," *Habitat International* 27 (2003), 245–269.

24. As later discussed in relation to the "Favela-Bairro" and "PAC" programs in Brazil, in many cases, the listed initiatives were greatly affected by governmental and political changes.

25. The Programa de Aceleração do Crescimento (or PAC, Growth Acceleration Program) was established in 2007 by President Luiz Inácio "Lula" da Silva and expanded under President Dilma Rousseff, providing large-scale infrastructure development across Brazil. In 2016, interim President Michel Temer and Planning Minister Romero Juca eliminated the managing department of the PAC. For more information, see https://catcomm.org/pac/; accessed January 20, 2021.

26. For an overview of Jáuregui's work, see Machado, Rodolfo, *The Favela-Bairro Project: Jorge Mario Jáuregui Architects.* Harvard University Graduate School of Design, 2003.

27. As stated by Claudio Acioly (et al.), "The Favela-Bairro Program is noteworthy as an example of slum upgrading without full land tenure legalization and for its use of concession of right to use but not full ownership of land in order to allow this program to take place... the program focused its investments on the public domain e.g. streets, pavement, drainage, water, sanitation, public lighting, public squares and public spaces, and playgrounds for children, assuming that the private housing/plot domain would be taken care by the individual households." UN-Habitat paper (by Claudio Acioly, Jean D'Aragon, and Mathew French), "Streets as tools for urban transformation in slums: A Street-Led Approach to Citywide Slum Upgrading," 2012, 28.

28. During my visit to Rio de Janeiro in 2018, Jorge Jáuregui was kind enough to tour me through several of his interventions in favelas. We observed, with a

deep sense of sadness, the serious state of abandonment and neglect of various buildings and public spaces.

29. For a chronology of the cancellation of slum upgrading works in 2016, see https://www.rioonwatch.org/?p=28887; accessed Feb 12, 2021.

30. During my visit to Medellin in August 2019, I had the opportunity to meet and hold numerous discussions with various members of Echeverri's team. I particularly discussed the implementation of participatory design with architects Sebastián Bustamante and Isabel Basombrío, both currently working at the URBAM.

31. The notion of Medellin "paying off its historical debt to its humblest neighborhoods" was one of Sergio Farjardo's main campaign principles and catchphrases. For commentary about the political implications of this proposal, see Caicedo Hinojos, Gustavo, *Milagros urbanos: Liderazgo y transformación urbana en Bogotá y Medellín*, Editorial Universidad del Rosario, 2018, 91.

32. Echeverri Restrepo, Alejandro, and Francesco Orsini, "Informality and Social Urbanism in Medellin," in Michel Hermelin et al., *Medellín: Environment Urbanism Society*, Universidad EAFIT, 2012, 143.

33. Given the unstable situation of the areas adjacent to the Juan Bobo Creek, described as a case of "high-risk housing with a worrying state of structural degradation," Echeverri and Orsini proposed to relocate the population to nearby newly constructed, mid-rise residential buildings. It should be noted that this was one of the few instances they opted to build new housing. See Echeverri, Restrepo and Alejandro Francesco Orsini, "Informality and Social Urbanism in Medellin," in Michel Hermelin et al., *Medellín: Environment Urbanism Society*, Universidad EAFIT, 2012, 148.

34. Interview with Sergio Fajardo after receiving the Curry Stone Design Grand Price: https://www.youtube.com/watch?v=RgiUMimrGgU&feature=youtu.be, accessed Feb 15, 2021.

35. A strong indicator of the reduced role of housing in social projects in Latin America is the 2016 report by the Inter-American Development Bank. Its authors describe the advantages of slum upgrading, community participation, and bottom-up processes when intervening in favelas. Referring to the PAC Programs in Manguinhos and Rocinha favelas, the report states, "Overall, slum upgrading was based on a broad process of social support aimed at encouraging the participation of local society, ensuring dialogue, improving income indicators, building capacity, and health and environmental education." See Magalhães (Ed.) *Slum Upgrading*.

36. For an outline of Fernando de Mello Franco's plan for intervening favelas in Sao Paulo, see D'Almeida, Carolina Heldt and Fernando de Mello Franco, "Desenho institucional para a governança e planejamento metropolitanos em São Paulo," *Pós. Revista do Programa de Pós-Graduação em Arquitetura e Urbanismo da FAUUSP*, v. 25, n. 46, 2018, 32–55.

37. See Fernández Castro, Javier, "(Re)Urbanization of Villa 31 Carlos Mugica Empowerment of a Slum in Buenos Aires," in Bolay, Jean-Claude, Jérôme

Chenal, Yves Pedrazzini, *Learning from the Slums for the Development of Emerging Cities*, Springer, 2016, 93–101.

38. For an overview of Flavio Janches's intervention in Villa Tranquila, see Meninato, Pablo and Gregory Marinic, "Nuevas Tácticas de Diseño Urbano en Latinoamérica," *AULA Humanity and Social Sciences Journal*, Vol. 64, Number 4, January-June 2019.

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Chapter 2
Room by Room: An Exploration of the House

Tatiana Bilbao and Ayesha S. Ghosh

Abstract As lack of dignified housing remains a global crisis, particularly, in rapidly growing urban areas, this chapter questions the definition of the house. It includes a brief introduction on the development of the traditional single-family dwelling, as well as policy that reinforces its ubiquitous construction as a housing solution. This chapter explores a selectiono of typical programmed spaces found in a generic house and reflects on alternative ways to think of those spaces, as well as explores how those spaces can be culturally or socially different. It argues for an expanded vision of housing typologies to allow for diverse ways of living that build stronger communities and sense of belonging.

Keywords Housing · Globalization · Cities · Community · Sharing

> *The house of our time does not yet exist, however, the transformation of the way of life demands its realization.*
>
> Mies Van Der Rohe.[1]

The house is a fundamental architectural typology that has structured our everyday life; it defines relationships with our bodies and other people. Thus, the house continuously remains a contested space manipulated by social, political, and economic forces. The idea of the house has existed in numerous forms, from the simplest shelters to complex social experiments. It has transformed and evolved over time. The house perpetuates social order for those within it, as well as between households. If you close your eyes and are asked to envision "a house," what do you see? Most likely, it is a pitched roof over a boxy volume, a handful of windows with a door in the center (Fig. 2.1). Possibly, there is a yard with a manicured lawn. Despite geographical location, cultural context, or even climate conditions, this image of the house is relatively consistent. It is a fascinating phenomenon, considering global diversity.

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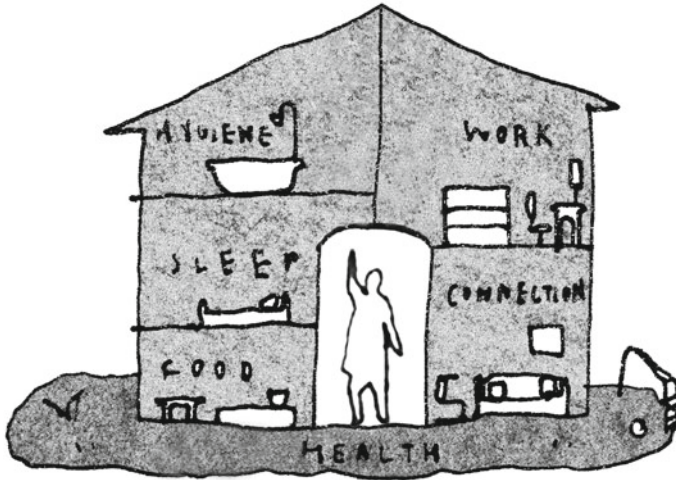
Fig. 2.1 House. *Drawing* Tatiana Bilbao Estudio

One of the origins of the typical home layout is in Henry Roberts' Model Houses for Families, displayed at the Great Exhibition in London in 1851.[2] This apartment proposal formalized an evolution of the privatized family home into room-based functions. Bedrooms were divided by familial role and gender, alongside a kitchen, bathroom, and scullery. The division of spaces enforced a way of living based on gendered power dynamics, unpaid domestic labor, and prescriptive visions of the nuclear family.

The Western house continued to develop through the nineteenth and twentieth centuries. It was used as a commodity to promote capitalist economic development. It functioned as the site for uncompensated reproductive labor such as cooking, cleaning, and child rearing. Reproductive labor was the infrastructure to support paid male labor. It was a symbol of achievement and sold as a basic necessity. By the 1950s, the relationship between the house and economic structure was taken further as post-war production focused on commodities such as washing machines and toasters. The cost to maintain a house increased, impacting the reliance on jobs, but so did the labor to maintain the private house, increasing the time spent inside the home as caretakers. This rigid patriarchal house type is clearly seen in the houses of Levittown.[3] Here, the highly individualized house became the pitch roofed ideal.

A Brief History of a Global Crisis

The vision of the ideal house is important to understand as it also influences policy decisions on how to address a global housing crisis.[4] For decades, international and local agencies have identified a lack of housing—especially for disenfranchised

populations—and pursued grand solutions. In 1989, Martha Rosler erected a Specta-color screen with the words, "Housing is a Human Right," blinking orange in Times Square. This sign was part of a Public Art Fund series, "Messages to the Public," which also included Anne Turyn's message, "What if everyone had a home." In that same year, Internationale Bauausstellung (IBA) Emscher Park was held in the Ruhr region of Germany. The program explored and showcased strategies for revitalization and development, including the topic of housing which aimed to shift the post-industrial landscape of the region. It included a search for new forms of housing through architectural and urbanistic ideas. A conference to find solutions for pressing issues on housing was not unusual. This was the third IBA (1957, 1979) and each addressed different political, economic, and social challenges.[5]

In 1976, the United Nations hosted "Habitat I" in Vancouver, the first world conference on human settlements.[6] The international conference acknowledged the growing housing crisis caused by global urbanization. The conference formally acknowledged the difficulties of expanding cities fast enough to create dignified settlements for low-income and disadvantaged populations. The conference casts its lens on a problem in global discourse that remains unsolved.

Galvanized by "Habitat I," the Mexican government established the Ministry of Human Settlements and Public Works, followed by the 1979 National Housing Program.[7] These programs promoted construction and loan-based subsidies of housing—a constitutional law in Mexico. This era of development in the 1970s and 80s resulted from collaborations of not only policymakers and NGOs but also opened the door to architectural experimentation and large-scale projects by architects Mario Pani, Teodoro González de León, and Pedro Ramírez Vázquez. These projects not only tackled the house as an independent unit but continued a legacy of urban planning that addressed humanity, community, services, and access to greenspaces.

The twentieth century movement of populations from rural areas to urban ones has not slowed, and similarly, the demand for housing solutions has not decreased. In early 2020, the COVID-19 pandemic brought issues of homelessness and lack of adequate housing into sharper focus as governments mandated people to stay-at-home.[8] Many people face challenges of adequate housing, overcrowding, access to resources, or even safe home environments. The global pandemic has accelerated the intersectional issues surrounding housing.[9]

The Case of Mexico and Minimums

With a population of 126 million and 35,600,000 houses, estimates claim that there is still the need for 9 million additional homes in Mexico.[10] The "Mexican miracle" era of federally led housing construction shifted under the presidency of Vicente Fox. The development of housing became a numbers game; quantitative evaluations were elevated over quality and diversity with 2,350,000 houses built in 6 years.[11] Low-cost and developer-driven uniformity drove the impressive numbers, resulting in endless sprawl of identical single-family homes blanketing the edges of cities

with no unique qualities. The homes mimicked the idealized vision of houses seen in Levittown. The monotony produced a placelessness; functional needs like schools, parks, and commerce were difficult to access. The failure of the one-house-fits-all approach was proven when these cookie-cutter boxes started to be abandoned.

However, much of the typological failure came from policy and legislation. Rather than allowing for diverse ways of living, or involving the desires of the habitants, policies mandated minimums for "dignified" housing and standardized the form of the house. The law prescribed a minimum set of rules to meet basic human needs. This whirl of rules suggests that every house needs a kitchen, bathroom, and living area with a total minimum area of 40 m^2 of space. Crisscrossing housing agencies further suggest that a kitchen should be at least 3.3 m^2, a bathroom at least 2.73 m^2, and a bedroom at least 7.29 m^2, and so on.[12] In one definition of dignified housing, it states that there should be no more than 2.5 persons per bedroom.[13] The cutting in half of a person is obviously an effort of averaging but dehumanizes people into demographic numbers. The rules for housing in Mexico, like in many other places, standardize how people live in disempowering and ineffective ways. Good intentions turn the house into an act of force.

Rethinking the House

This context made us question for whom the house is designed, and how we can translate other ways of living into the house (Fig. 2.2). The search for new strategies involves understanding the meaning of the house, not only to ask what is a house but why is the house the way that it is. In an effort to find new ways to approach dignified housing, we reduced the traditional idea of home into its basic elements—bedroom, kitchen, bathroom, and garden/terrace. We looked at each space in terms of activity, role in life, and relationship to the body. From there, we explored examples of places where those same activities or relationships to the body occur, sometimes within domestic settings, and others not. These relevant examples helped us to understand the various ways that space could be reinterpreted to produce different outcomes or to accommodate different user groups and accomplish roles beyond basic necessity (Fig. 2.3). This chapter compiles some of those examples, as well as fragments of thought and speculation on ways we can reimagine the traditional spaces in a house. Housing solutions are still being developed but often lack empathy, cultural diversity, or specificity, so we are reorienting the house through the lens of use, need, and desire.

Bedroom

The bedroom is the most private space in the house. It is the place for resting, sleeping, dreaming, intimacy, and more. The bedroom is where one drifts from waking pressures and reality into a place of unconscious abandon. The bedroom is perhaps the

Fig. 2.2 Community-owned and operated land for productive uses. *Collage* Tatiana Bilbao Estudio

most important space that can dictate that a structure is in fact a house, because what is a house without a place to sleep?

In 1926, Hannes Meyer took the photo, *Co-op. Interieur.*[14] Meant as a provocation, it shows minimal curated objects assembled to create a living space. Its most dominant furniture is the bed. Although this image is part of Meyer's work promoting co-operative living and elevates the community over the individual, the place for sleeping remains private. The gramophone tucked in the corner gives this bedroom a sense of inspiration and imagination—acts of sleeping and creativity side-by-side. In the Korean *hanok*, the bedroom exists in the time scale of the day. A room becomes a bedroom when the *yo* mattress is taken out with its bedding and opened on the floor. In the morning, the bedroom transforms into a place for reading, gathering, or entertainment with the rolling of the yo mattress. In the opening scenes of the documentary "Los Que Se Quedan" (2008) by Carlos Hagerman and Juan Carlos Rulfo, we find ourselves in the waking moments of the day inside a bedroom in the Yucatan.[15] A mother wakes her children, one groggy in bed and the other in a blue hammock. The bedroom is shared by the whole family.
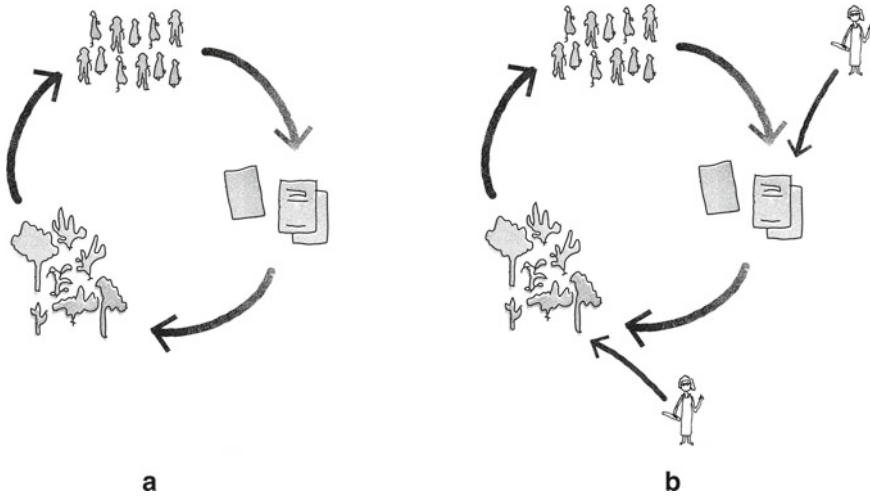
Fig. 2.3   a, **b** Diagrams showing how to use the concept of "the commons" to create a community-driven design. *Drawings* Tatiana Bilbao Estudio

The bedroom implies privacy and safety. The "master bedroom," reinforces the heteronormative family as the room for the mother and father. It is the place for intimacy and for sex, for reproduction. The bedroom is for reproduction of both social norms and procreation. Now, more than ever, the bedroom has even become the place for production. In 2012, 80% of New York young professionals admitted to working from bed.[16] With pandemic stay-at-home measures in effect in 2020 and even 2021, that number is certainly higher.

Kitchen/Dining

The kitchen is one of the strongest areas of tension in the house. The kitchen of a single-family home or apartment is a feat of social engineering and design. It is not just where food is kept and prepared to nourish the bodies of the household. It is a key site where the politics of gendered roles within societies play out between the sink and stove.

In 1919, Christine Frederick attempted to elevate kitchen design to a field of study with the use of domestic science.[17] She focused on increasing efficiency in design to reduce labor times in the kitchen. Inherent to this intention was that kitchen work was meant for a woman with limited time due to the amount of other domestic labor she needed to accomplish each day. By 1926, Margarete Schütte-Lihotzky presented the Frankfurt kitchen, also optimized for efficiency in social housing projects.[18] The precise design has since been used as a basis for apartment kitchens. Designed as a solution to spatial limitations, it accommodates one person in a narrow space,

choreographing tight pirouettes between cabinets and cooking utensils. The standardization implies that preparing food is not a communal activity, there is no space to share the labor, nor the knowledge kept in the kitchen.

By the 1950s, advertisements for the sale of appliances showed smiling, white women in their kitchens with shiny new toys. This image sold the idea of domestic labor bringing happiness, and such happiness could be bought with a new dishwasher. Each home was equipped with its own kitchen, marking the isolation of women in their commodified cells of production. Alternately, in the 1930s, Alva Myrdal, Sven Ivar Lind, and Sven Markelius experimented with constructing co-housing buildings. A large communal kitchen on the ground floor, managed by some in the building, liberated families to have both men and women join the work force, while still having prepared food on the dinner table delivered by a dumb waiter. A shared kitchen, and distributed labor sustained a community and liberated women who chose to work.[19, 20]

Ollas comunitarias in Peru have been a tradition for decades. Women self-organize to feed their communities in need. Cooking over flames, often in open air, the kitchen has become a place of gathering, community, and generosity.[21] Preparation of food is an intergenerational activity (Fig. 2.4). It involves rituals and repeated motions, the handmade roti in India—rolling dough and placing it on the fire by a parent, grandparent, or child. Food carries history and identity, and a kitchen can too.

Bathroom

The bathroom is an exclusive and personalized space, nurturing the body and its physical necessities. The global and "typical" idea of the modern bathroom is credited to the 1800s thanks to city sewers, central heating, running water, plumbing, and the flush toilet. The bathroom is an engineering feat. The technical requirements of running water joined the bathtub and toilet in the same space. Victorian conservatism further enclosed the space and also moralized natural, biological bodily functions.

In 1936, famed industrial designer Henry Dreyfus designed bathroom fixtures for Crane Co. Advertisements show a bathroom containing a brightly colored toilet, bathtub, and sink arranged in a single room. This style of the bathroom was not only a commodity but also an export that became the norm around the world. In his book, "Designing for People," Dreyfus even mentions that his designs are meant to simplify the lives of housewives, by simplifying forms to make sanitary ware easier to clean.[22](79) The bathroom is representative of our relationship to cleanliness and hygiene, of both our bodies and the place itself. The Dymaxion bathroom designed by Buckminster Fuller in 1936 showcases innovation in bathroom design, but also all the fields with which it engages.[23] In part a noble effort to increase access to Western ideals of sanitation, it is inherently an ecological project through the minimal use of water and recycling of waste material.

Fig. 2.4 Communal kitchens. *Collage* Tatiana Bilbao Estudio

In her essay, "We shall deal here with humble things," Barbara Penner writes, "Perhaps the simplest way to begin to describe the sociotechnical view of the bathroom is to note that just as turning on a tap plugs us into a hard network of pipes and plants; it also plugs us into a soft network of social attitudes and beliefs. This is (at least partially) what provocateur Slavoj Žižek has in mind when he asserts: "As soon as you flush the toilet, you are in the middle of ideology."[24]

Bathhouses are commonplace around the world including Turkey, Russia, and Korea. Social relationships grow between showers, steams, and dips in pools. Business deals are made, or neighborhood gossip is exchanged. The body is cleaned and spiritually cleansed; networks are created between the skin and the mind. In Korea, there is a strong culture of frequenting public bathhouses. Here, it is not uncommon to pass through wet spaces, hot and cool pools in the nude around friends, family, acquaintances, and strangers (in gender-divided spaces). Nudity is normalized, and it is not uncommon that someone you may not have known before would assist in scrubbing your body clean. In this environment, cleanliness becomes a communal

activity.[25] To speak of toilets, baths, and hygiene is to speak of the body in its most intimate and vulnerable space. It is the moment where the physical body is inherently tied to psycho-spatial awareness.

Garden/Terrace

Having an outdoor space, proper lighting, and ventilation are essential to a livable home. The space takes many forms, a garden, a terrace and sometimes, even something small like a balcony. The garden, with its invitation of nature in the domestic realm, is representative of aspiration. It is a commodity, like the garage, embodying a privatized and personalized space that symbolizes success. The garden takes idyllic pastoral ideas and cuts it into small pieces surrounded by fences. The garden has potential to fulfill its role of bringing nature into domestic space, while also strengthening community.

Silvia Frederici writes, "Urban gardens have opened the way to a *rurbanization* process that is indispensable if we are to regain control over our food production, regenerate our environment, and provide for our subsistence. Gardens are far more than a source of food security; they are a center of sociality, knowledge, production, and cultural and intergenerational exchange."[26] Her description shows the potential to redefine how we create community, but also introduces ideas of *intergenerationality* and skill sharing that should be reclaimed in the home—the most intimate space, the spatial building block of social relations from family to community. The urban garden can begin to stitch together many homes.

Similarly, Dolores Hayden proposed an alternative to single-family home backyards. In 1984, her project, "HOMES" (Homemakers' Organization for a More Egalitarian Society), empowered those doing domestic labor by retrofitting existing suburbs to create collective care spaces, kitchens, and economic opportunities closer to home.[27] In her proposal, the backyards of houses on a suburban block are fused and reprogrammed with a play area, laundry, shared office, vegetable garden, tables, large communal kitchen, and grocery. Each house pools its resources and receives much more in return, as well as a stronger and safer community.

The importance of using gardens and terraces as a place of interaction has become more obvious with COVID-19. Access to outdoor space has become much more of a privilege with stay-at-home orders. In New York City, even fire escapes became an extension of the home. Here, people gather to listen to music a neighbor might be playing or to cheer for healthcare workers at the same time everyday.[28] Small apartments had a liminal zone on these balconies, or on stoops or sidewalks where individuals could safely step outside, and with a healthy distance, be physically present in an urban collective.
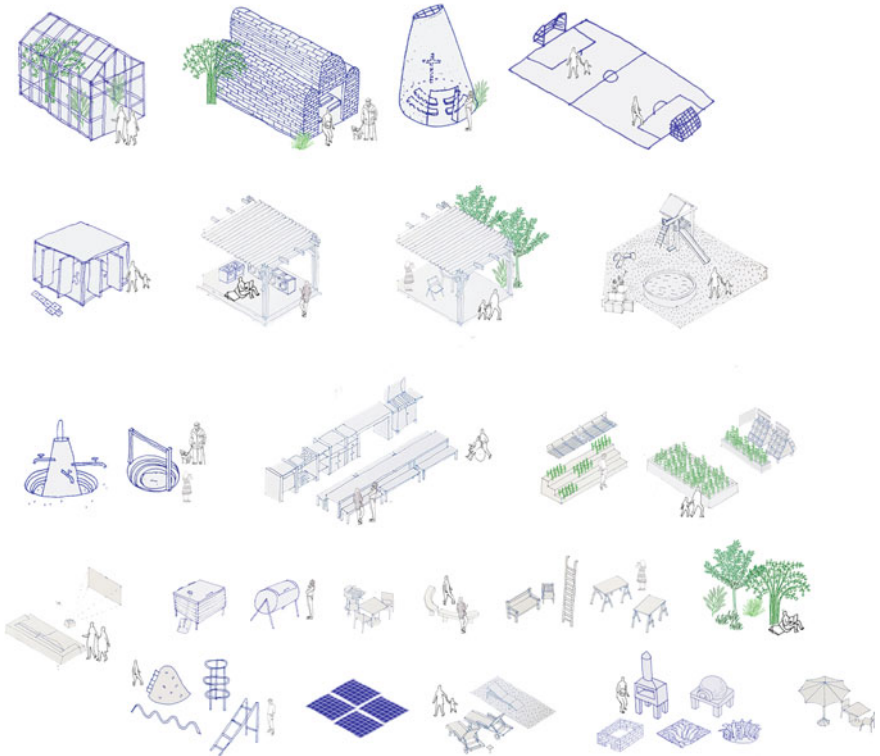
Fig. 2.5 Commoning elements. *Drawings* Tatiana Bilbao Estudio

Looking Forward

We are trying to add to our library of solutions (Fig. 2.5). In the current housing appa-
ratus, the production of space determines the lives of people in a blanketed sense,
creating many of the tensions and conflicts we see in domestic environments. We
are thinking of ways to design housing to accomplish more than minimum square
footage, but to invite all classes and races to construct their own ideal living situa-
tions that challenge limited views on social relations and household types (Fig. 2.6).
Considering some of the examples listed here, we see the way dynamic spaces can
take into consideration age, gender, and other forms of identity. The goal is to produce
solutions that are flexible to the reality that people are diverse individuals and not
simply demographic metrics. A house can be a tool to elevate a community; domestic
spaces can be used to generate connections and reconnect our bodies to space.

Fig. 2.6 Adaptive reuse. *Collage* Tatiana Bilbao Estudio

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Tatiana Bilbao began her eponymous studio in 2004 with the aim of integrating social values, collaboration, and sensitive design approaches to architectural work. Prior to founding her firm, Bilbao was an Advisor in the Ministry of Development and Housing of the Government of the Federal District of Mexico City. Bilbao holds a recurring teaching position at Yale University School of Architecture and has taught at Harvard University GSD, AA Association in London, Columbia University GSAPP, Rice University, University of Andrés Bello in Chile, and Peter Behrens School of Arts at HS Dusseldorf in Germany. Bilbao has been recognized by the Emerging Voice by the Architecture League of New York (2010), Kunstpreis Berlin (2012), Global Award for Sustainable Architecture Prize by the LOCUS Foundation (2014), as well as the Impact Award Honorees for ArchitzierA + Awards (2017), Marcus Prize Award (2019), Tau Sigma Delta Gold Medal (2020), and as Honorary Fellow of the Royal Architectural Institute of Canada (2021).

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Chapter 3
Tactical Appropriations in the Urban Realm: Informal Practices and Reinventions in the Contemporary City

Patrizio M. Martinelli

Abstract The chapter investigates tactical practices, informal interventions, and spontaneous appropriations that design the public realm of the contemporary city. This investigation begins with the reflections of Carlo Giulio Argan and his phenomenological interpretation of the city as an artifact experienced through informal practices that contradict the formal order of the planned city. This approach echoes the Situationist critique of the modern urban environment, based on intuitive drifting in the urban realm, as well as unexpected appropriations of places in reaction to urban formality shaped by authority, politics, and the economy. The opposition between "magisterial view" and "plebeian view" (as defined by historian Brian Ladd) is theoretically framed in de Certeau's ruminations on strategy and tactics in the city. The former represents spaces designed by abstract models that express regulations, constraints, and limitations; it is the instrument of power to plan, manage, and control socio-spatial phenomena in the long term. The latter is defined by short-term, spatially limited interventions, reactions, and actions that revise, reinterpret, and reinvent pre-planned strategies and spaces. This duality is recognizable in the recent operative investigations of tactical urbanism, with projects for abandoned and underutilized urban fragments, as well as the reinvention of public space, particularly the street, during the COVID-19 era. These temporary and bottom-up punctual interventions represent modalities of appropriations of the urban space. Their intentions and effects respond to criticalities that repair the failures of the modern and contemporary discourse on urban public space.

Keywords Public realm · Informal practices · Appropriations · Tactical urbanism · Public space

There are numerous ways of looking at, reading, and interpreting the complex phenomenon of the city. The primary lenses to dissect it belong to the realms of urban planning, urban design, and architecture, with the essential contribution of

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a series of disciplines such as, but not limited to, history, economics, sociology, ecology, engineering, and geography. These perspectives intertwine one with one another to plan, build, and improve the physical contexts of social life. Other than these, an essential contribution to the conversation about the city often comes from other perspectives—painters, novelists, poets, movie directors, photographers, art and literature critics, and many others—who engage the city to offer insights that interpret urban phenomena.

Among these different ways, I find that there is a consistent and common dichotomy in thinking about the city that historian and author Brian Ladd recently defined as "magisterial view" and "plebeian view."[1] The first is the view which belongs to planners and to the powers that inform this perspective; its visual expression is the plan, the aerial photograph, or the bird's eye view. Through this vision, rulers and administrators conceive the city as a whole, as a work of art, an organism, or machine whose structure is defined by form and order. The "plebeian view" is the perspective of the pedestrian who walks in the crowd—looking, hearing, smelling, and feeling the life of the street and buildings. Whereas literature offers the Baudelairean *flâneur* as its most eloquent representative of this approach, urban planning gives us Camillo Sitte.

In his seminal *City Building According to Artistic Principles*, published in 1889, Sitte embraced the pedestrian's perspective and use of the urban environment in his research on cities and towns. This duality of interpretation is well represented by Le Corbusier in the book *Towards a New Architecture.* In a chapter dedicated to the plan, he shows the diagram of the Acropolis in Athens, and on the same page, the perspective of the same place from the pedestrian's point of view. The statement that accompanies this pairing is the *leitmotif* of his proposition, balanced between the abstraction of the plan and its ability to create order and form. Furthermore, it illustrates the phenomenological approach of the *promenade architecturale,* based on the sensual experience of the body in space: "The plan is the generator. The eye of the spectator finds itself looking at a site composed of streets and houses,"[2] looking "at the creation of architecture with his eyes which are 5 ft. 6 in. from the ground."[3]

In *The Practice of Everyday Life*, these views correspond to what Michel de Certeau defines as *map* and *tour,* referring to Charlotte Linde and William Labov's study on language and space focused on New York residents' descriptions of their apartments.[4] The *map* represents a *tableau* that defines an order of places[5]; the *tour* is related to the act of going, of spatializing actions, and of organizing movements.[6] A similar survey that overlaps *map* and *tour*, at the urban scale, is what architect Sheila O'Donnell recently shared in her visual essay "Drawing on the Nolli Plan." Every year she visits Rome, bringing with her a set of photocopies of Giambattista Nolli's map of Rome, published in 1748, using it to mark with five different colored pencils the paths of her everyday walks around the city. "These visits usually last five days," she writes, "and even five lines drawn on the same little street or piazza, or inside the Pantheon, tend to get muddied and indistinguishable.(…) It's not really a record to be examined or analyzed; it's a graphic representation of an experience, as well as being part of the experience."[7]

Fig. 3.1 The informal uses of the urban realm can be represented as a painting of Jackson Pollock. *Collage* Patrizio M. Martinelli

This process of informal explorations of a formal and ordered artifact such as the city of Rome echoes a similar way of reading the city expressed by Italian art historian Carlo Giulio Argan. This point of view was suggested in the context of a symposium organized in 1966 in Venice on the theme "The phenomenon of the city in today's life and culture." The event hosted contributions by experts in different disciplines, such as sociologist and philosopher Edgar Morin, political scientist Giorgio Galli, art critic Pierre Restany, philosopher José Luis López-Aranguren, and others. Argan's intervention, later published with the title "Lo Spazio Visivo della Cittá" ("The Visual Space of the City"), is focused on the definition of "the city," reflecting on the purpose and functions of urban planning, and on a phenomenological reading of the city.[8] Contemporary urban studies, Argan argues, consider the city not as a place to inhabit, but as a well-ordered machine whose main aim is to fulfill the specific function of production. But the city is more than this. If we would be able to survey and graphically translate the use of the city of each inhabitant, using different colors, overlapping them one on the other, the result would be very similar to a painting by Jackson Pollock or Mark Tobey (Fig. 3.1). "A sort of immense map," Argan explains "…made of colored lines and dots, an inextricable tangle of signs, of apparently

arbitrary paths, of tortuous and disheveled filaments which intertwine, stop, start again thousands of times, and after strange routes get back to the starting point."[9]

We know that each individual's real paths would be hardly related to the predefined form of the planned city. The citizen (whom de Certeau would call "the walker") moves informally through the city, as Stephen Dedalus walks around the streets of Dublin in Joyce's *Ulysses*: following "…a series of unconscious impulses, practices, uncontrolled desires, which are not in any way inexistent or unmotivated," such as wanting to have a coffee in a specific bar, or to see a particular window shop, or the inexplicable desire to look at the perspective of a street, or passing by a movie theater or a postal office.[10] Therefore, in Argan's opinion, the informal poetics of Pollock, Tobey, and Joyce have been able to capture the image of the real urban space and record the actual rhythm of urban time, applied to the formal order of the planned city as a sort of counterpoint. Here, the informality of these signs and their apparently random composition reveal—under the surface—needs, patterns, speeds, pauses, measures, distances, and eventually spaces and life.

I find it very interesting how Argan uses the art of painting to frame this reading of the city. As it is well known, Pollock and Tobey are eminent figures of what writer and art critic Michel Tapié defined as "Art Informel" ("Informal Art"), in his 1952 book *Un art autre: où il s'agit de nouveaux dévidages du réel*.[11] With the term "informal," we refer, sometimes questionably, to artistic movements such as American action painting and abstract expressionism, *art brut*, *tachisme* ("tachism"), and Italian *spazialismo* ("spatialism").[12] The "informal" artists in the 1940s–50s reacted to the formalism of avant-garde modernism, relying on an anti-geometric, anti-naturalistic, non-figurative approach while focusing on the pursuit of spontaneity, looseness of form, individual expression, tension of gesture, irrationality, and materiality. According to the critic Maurizio Calvesi, '*informel*' is not simply a synonym for 'without form,' but signifies 'non-formal;' it implies the negation of form as a category or value that remains distinct from reality, although it may represent it. It denies the idea of form as something created according to plan."[13]

Therefore, according to Argan's ruminations, we can say that Jackson Pollock's action painting and dripping, or Emilio Vedova's spatial gestures, often extended beyond the frame to represent critiques of formalism. They are analogous to the walker's spontaneous assessments of the predetermined city form, informal appropriations, and reinventions of the over-designed and over-planned urban space.

A similar approach is recognizable in the reflections of Danish artist Asger Jorn, a member of the avant-garde group CoBrA, who, in his book *Immagine e Forma* ("Image and Form") published in 1954,[14] expressed a rebellion against functionalist artists, architects, and urban planners who "were succeeding in creating a world that was more and more controlled, ordered, rationalized, and boring."[15] Jorn was also a founding member of the Situationist International, a group formed in 1957 with the unification of the Parisian Lettrist International guided by Guy Debord, the International Movement for an Imaginist Bauhaus, and several anti-functionalist artists headed by Jorn.[16]

The Situationist group developed a strong critique of modern society, with the purpose of a radical transformation of everyday life with the suppression of philosophy, the realization of art, the abolition of politics, and most of all the creating "situations."[17] These, in the words of Debord, are "the concrete constructions of momentary ambiences of life and their transformation into a superior passional quality," with interventions in the actual material environment, "the creation of new forms and the *détournment* of previous forms of architecture, urbanism, poetry, and cinema."[18] The instrument for this is Unitary Urbanism, the "combined use of arts and techniques as means contributing to the construction of a unified milieu in dynamic relation with experiments in behavior."[19] This is experienced through the *dérive*, the uninterrupted drifting through sequences of urban places, and the *détournement*, as the appropriation/integration of "present or past artistic productions into a superior construction of a milieu,"[20] and art would not be relegated to the artist's or the architect's atelier or the official and formal institutions, but would participate in the urban life of city streets. From these statements, it is evident that the Situationists' need to transform the city from the place of order and control, of alienation and consumption, to a renewed place of intersecting renovated relationships, of the reinvented possibility of inhabiting, and the stage for radical social and cultural transformations of the community (Fig. 3.2).

Of course, the critique of the city, for them, is a critique of Paris. The French capital was the perfect expression of nineteenth-century and twentieth-century urban planning that embodied an extreme idea of urban form as an instrument of power. "Rulers with growing architectural ambitions…" Ladd argues, "…began to shape buildings and streets not only to make their cities magnificent, but also to keep their people healthy and happy or at least orderly and docile," and Paris was one of the main examples.[21] Napoleon III and Haussmann set up a planned composition of straight and large boulevards carved out from the dense historical urban fabric, ambiguous devices of health and sanitation, of social and political control, and the possibility of speedier vehicular traffic: aspects that radically transformed the destiny of the city.[22] The capital was also Napoleon III's staged collection of monuments, composed along aligned paths that celebrated "the heroic accomplishments and communal responsibilities of his directorship."[23] Finally, Paris was the laboratory of the Modern Movement's urban planning. On the one hand, this was expressed by Le Corbusier's Plan Voisin which overlapped an orderly Cartesian grid onto the *tabula rasa*; it rid the *ilots insalubres* of the city and preserved only the most iconic monuments. On the other hand, it is expressed by the "building-as-city" type represented by the Corbusian Unité d'Habitation in Marseille, or the modernist *grand ensembles* built around the peripheries of French cities.[24]

The iconic collage, *The Naked City*, realized by Guy Debord in 1957, represents the reaction to this idea of the city as the expression of power, order, control, surveillance, and big gestures coming from above.[25] The collage is a composition of nineteen cut-out pieces of a map of Paris, slightly detached from one another and connected by red arrows. These are the depiction of the *dérive* inside the city through the "spontaneous turns of direction taken by a subject moving through these surroundings in disregard of the useful connections that ordinarily govern his conduct."[26] These links represent
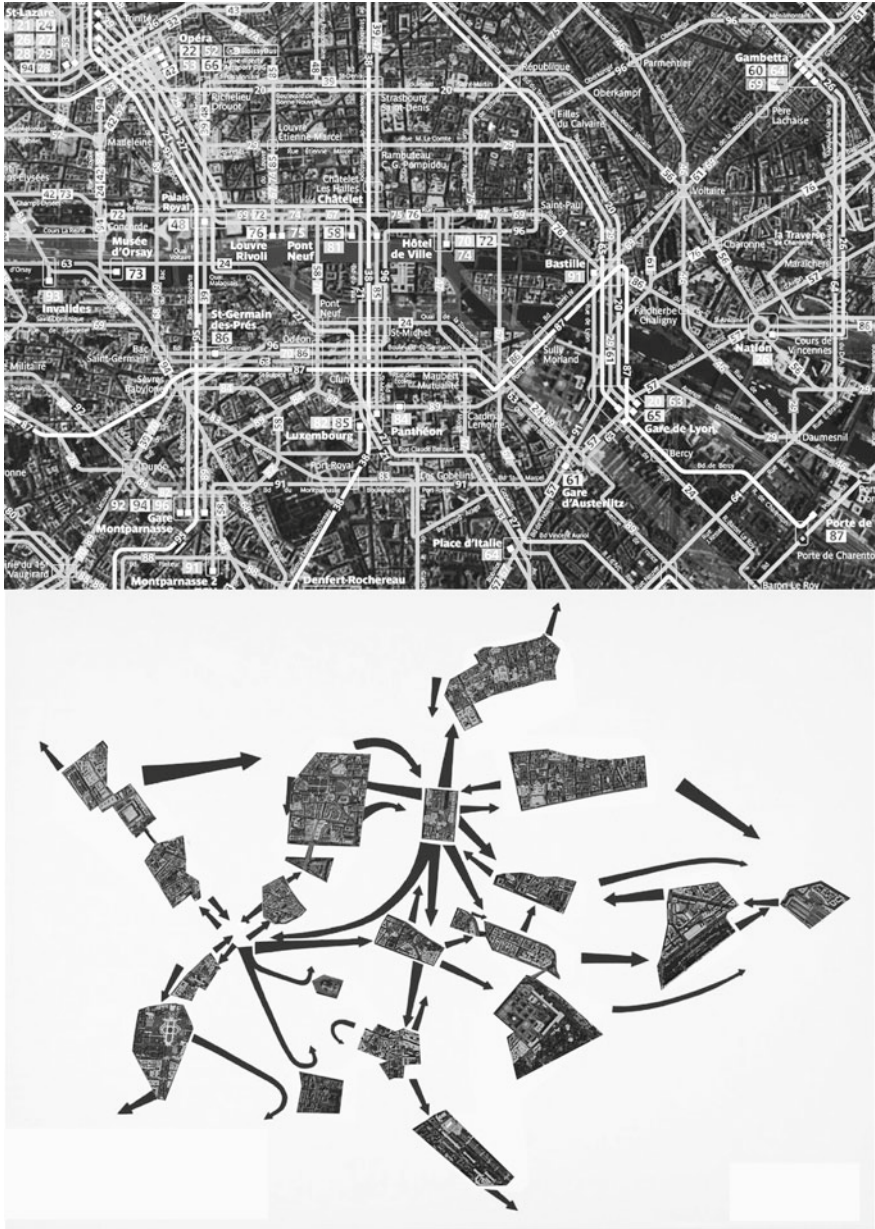
Fig. 3.2 The informal appropriations of Paris theorized by the Situationist as a critique of the formal order and constraints of the modern city. *Collage* Patrizio M. Martinelli, after The Naked City by Guy Debord

how these different areas of the city can be reached and experienced from the street level. They don't follow the promenade linking historic monuments and grandiose architectural facades staged by the Emperor, nor do they use public transportation that follows pre-ordered forms of utilitarian connections. Rather, they are achieved through unexpected trajectories insubordinate to predefined directives—by walking or possibly taking a taxi.

> "We all know how important taxis are for the recreational activity we call *dérive.* (…) Only taxis allow true freedom of movement," wrote Michèle Bernstein, member of the Situationists and Debord's wife. "By traveling varying distances in a set time, they contribute to automatic disorientation. Since taxis are interchangeable, no connection is established with the 'traveler' and they can be left anywhere and taken at random. A trip with no destination, diverted arbitrarily en route, is only possible with a taxi's essentially random itinerary."[27]

The Situationist *dérive*, as pointed out by Thomas McDonough, well represented by this "renovated cartography, (…) takes place in a space that is imposed by capitalism in the form of urban planning," and through the "conscious appropriation of the city," emphasizing the "use value of space."[28] Situationists' tools are informal drifting, spatializing actions, and unexpected appropriations of the urban realm, that develop "the strategy (…) of overturning present conditions" that "destroy formalism."[29] That critique, de-construct, and de-compose, as shown in *The Naked City*, the "architecture as a fixed form" and the formal order of the city.[30]

Since the 1950s, we can situate the influence of the Situationists in several investigations of the city. Firstly, this is evident in the research and projects of Dutch artist Constant Nieuwenhuys, a member of the group, whose idea of the city was based on a continuous and collective urban space with a "constantly transmuting, labyrinthine structure in which residents lead a nomadic experience and—while creating and roaming—constantly visit new parts of the city (…) for shorter or longer periods of time."[31] We see traces of their reflections in Team X's reaction to the Modern Movement-Corbusian-CIAM's dogmas, through urban design based on the lenses of social human interaction and ethical inhabitation. Similarly, this happens in the Brutalist's spatial arrangements that, as pointed out by Reyner Banham, abandoned the symmetry and predominance of Euclidean geometry "based on rule-and-compass" imposed from above, toward compositions designed according to movement, experience, and "the topography of the site and the topology of internal circulation."[32] Certainly, the Situationist critique of city and society influenced the radical and visionary projects of Archigram or Superstudio, and the events of May 1968, along with the reflections of French author George Perec and philosopher and urbanist Paul Virilio, during their involvement in the 1970s in the journal *Cause Commune.*

As Virilio points out in a 2001 interview, the focus of their investigations was places and events (in the city), the notion of *détournment,* and the theme of *habiter l'inhabituel*: to inhabit the unusual, to take possession of the unexpected, and in other words, to go beyond the formal practices suggested by the planned urban environment. "At the time I was particularly interested in the notion of transgression in architecture," Virilio admits. "So I analyzed buildings that had somehow been transgressed in term of their use—churches that had become garages, garages that

had become museums, and so on—such as in terms of more specific actions, such as entering a church in horseback, or riding down a flight of stairs on a motorbike, or driving a car over rooftops."[33]

Analogously, in his 1974 seminal book *Species of Spaces,* a celebration of everyday life and a sophisticated investigation of the urban environment and its elements, Georges Perec applies the methodology of drifting, observation, description, and the consequent transgressive appropriations of the urban space. He aims to literally express the intention of occupying a series of places in Paris, reinventing them for his own domestic practices: "Why not set a higher value on dispersal? Instead of living in just one place, and trying in vain to gather yourself together there, why not have five or six rooms dotted about Paris? I'd go and sleep in Denfert, I'd write in the Place Voltaire, I'd listen to music in the Place Clichy, I'd make love at the Poterne des Peupliers, I'd eat the Rue de la Tombe-Issoire, I'd read by the Parc Monceau."[34]

Echoes of this idea can be found in Michel de Certeau's reflections, collected in *The Practice of Everyday Life.* In the chapter "Walking in the City," he explains how the "ordinary practitioners of the city" walk, creating networks of fragmented trajectories and alterations of spaces. These practices define an informal experience of the city, and an alternative spatiality: anthropological, poetic, metaphorical, and even mythic, opposed to the geometrical, panoptic constructions of the planned "concept city."[35] This, designed by an urbanistic system created according to abstract models that express regulations, constraints, and limitations intending to administer or suppress, becomes the opportunity for individual and collective appropriations. "If it's true," argues de Certeau, "that a spatial order organizes an ensemble of possibilities (…) and interdictions (…), then the walker actualizes some of these possibilities." He continues: "But he also moves them about and he invents others, since the crossing, the drifting away, or the improvisation of walking privilege, transform or abandon spatial elements," and de facto make up the city.[36]

Strategy and *tactics* are the terms that the French scholar uses to define the opposition between these two ways of designing and experiencing the city. *Strategy* is the instrument of power to plan, manage, and control spatial and social phenomena (a business, an army, a city, an institution) in the long term: "a Cartesian attitude" the author explains, expressed in actions which "elaborate theoretical places (systems and totalizing discourses) capable of articulating an ensemble of physical places in which forces are distributed."[37] On the contrary, *tactics* are short-term and spatially limited interventions, reactions, and actions that revise, reinterpret, and reinvent pre-planned strategies and spaces, taking advantage of opportunities and often of the temporary absence of power. We can say that while the city is the formal expression of a strategy, every other practice that erodes and eludes to any urbanistic systematicity—from the Situationist drifter to the tourist that deviates from the prescribed route, to the occupation of an abandoned building, or an underused urban public space—is the actualization of informal tactics.

This theoretical framework finds its expression, as mentioned, in everyday life, in the lives of "ordinary practitioners" of the city—within our individual and personal interpretations of the urban realm. We can employ these lenses to read other types of

spontaneous interventions that modify urban space at different scales. One of these is what happened between late 1970s and 1990s in the European and American cities, as pointed out by professor and sociologist Pascal Gielen, "murals and primitive graffiti, together with squatters' movements, continued the reappropriation battle. The monumental city's authority is undermined by all kinds of movements that finally transform urbanity into a situational event."[38] An example of this, among several others, happened in Berlin during the 1990s under the name of *Zwischennutzung*, the informal appropriations of neglected, decaying, or left-over spaces with activities such as temporary events, spontaneous children's playgrounds, and improvised recreational venues such as kiosks, bars, or clubs.[39]

Something similar happens in Münster, Germany, where the former harbor basin has been partially transformed into a residential and commercial district. But not completely: in fact a series of industrial buildings, some vacant and some still functioning, insist on large abandoned areas facing the water.

This *terrain vague* inspires a series of informal and spontaneous uses. Picnics, photo sessions, docking of private boats, concerts, performances, installations by young local artists, small boats, swimming races, and squatting in abandoned buildings—these are just some of the activities that give meaning and character to public space. Its *vagueness* allows for spontaneous interpretations and uses (Fig. 3.3).[40] As Peter Wilson notes, these undeveloped places "in Spain would be referred to as *zones of impunity*, a transitional no-man's-land, an overlap between still operative light industry and informal invasions by transgressive user groups."[41]

In recent years, these kinds of spontaneous interventions have continued to spread, leading very often to transformations of places and buildings. This so-called urban and architectural regeneration has, in some cases, mitigated their original character of opposition and critique, bringing them into the realm of control, order, and economic interests. The spirit of these actions is alive, thanks to the activities undertaken by actors such as city administrations, business and nonprofits, citizen groups, and individuals whose approaches are referred to as tactical urbanism (Fig. 3.4). As Mark Lyon and Anthony Garcia clarify in their publication, *Tactical Urbanism: Short-term Action for Long-Term Change*, this discipline "makes use of open and iterative development processes, the efficient use of resources, and the creative potential unleashed by social interaction (…) without the preponderance of planning," allowing "the immediate reclamation, redesign, or reprogramming of public space." [42] As the authors point out, paraphrasing Rem Koolhaas, the scale is the XS-Extra Small of the bottom-up punctual intervention of the citizen, as opposed to the XL-Extra Large of the monumental city master planning of the politician. The intention is to appropriate and re-activate underutilized outdoor urban spaces or bring back meaning, safety, and character to places that have, or never had, these qualities, such as vacant lots, rarely used parking lots, and unsafe streets. Urban furniture, painting, re-paving of urban surfaces, gardens, vegetation, pop-up economic activities, and low-cost built elements are the most common tools for these appropriations and transformations.[43] Even if temporary, they give quality and a sense of community to the almost forgotten spaces of the collective.[44] *Informal* in their critical opposition to a *form* of city that does not work, and *tactical* in their work on temporary and confined repairs of the
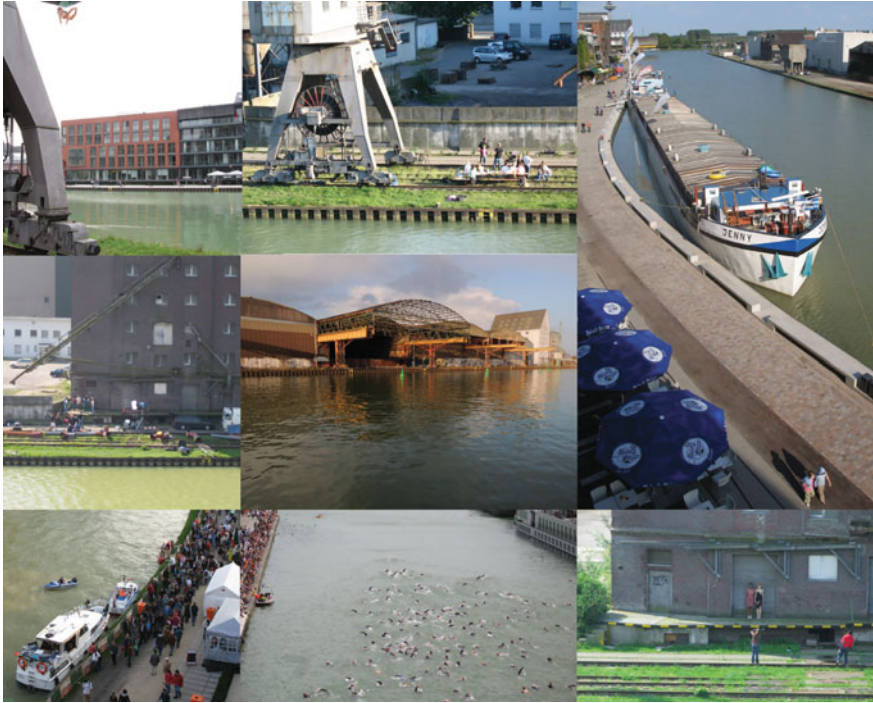
Fig. 3.3 The informal use of the *terrain vagues* in the harbor basin of the city of Münster. *Photos* Peter Wilson

collective good, these actions represent valuable instruments for a better life in the city.

An analogous *informal* and *tactical* approach became essential in 2020 with the advent of the COVID-19 pandemic, when the urban realm became heavily affected by the need of reducing the gathering of people and of keeping physical distance between individuals. In our cities, barrier elements and surface treatments with marks and signs appeared, to interdict or define the flow of people, or to specify the physical distance on sidewalks, squares, and parks. The grass surface of Domino Park in Brooklyn has been redesigned with a series of white chalk-painted circles that visually define the "bubbles," physically distanced according to safety protocols, where small groups of people could gather in the open air.[45] In the town of Vicchio, near Florence, an installation featuring a 1.8-m grid of squares painted on the cobblestones of Piazza Giotto illustrates safe use of public space and the reactivation of open spaces.[46]

Another informal appropriation happened in our cities' streetscape when municipal administrations allowed bars and restaurants a bigger exterior footprint for outdoor dining to limit occupancy in interior spaces (Fig. 3.5). On the one hand, this leads to the partial transformation of sidewalks and parking spaces in areas for al fresco dining. These exterior rooms, safe and protected thanks to signs, marks, and well-distanced devices—elements for separation or canopies, in some cases, took

Fig. 3.4 Tactical urbanism intervention in the context of the program "Build a Better Haymount", Fayetteville, North Carolina, USA, 2018. *Photo* Kristy Dactyl/flickr.com, CC-BY 2.0

Fig. 3.5 COVID-19 pandemic transforms the urban experience. Outdoor dining occupies the street in Mountain View, CA. *Photo* Travis Wise/flickr.com, CC-BY 2.0

Fig. 3.6 COVID-19 pandemic transforms the urban experience. Outdoor dining occupies the street in Chinatown, San Francisco. *Photo* Travis Wise/flickr.com, CC-BY 2.0

the form of transparent small bubbles or cabins to allow this practice in wintertime. These interventions became a sort of curious reinvention of architectural archetypes (the enclosure, the cave, the hut) for a new life of the street.

On the other hand, the extension of outdoor dining was possible thanks to the closure of entire streets, or part of them, so that a larger and safer area for business, clients, and "walkers" was guaranteed (Fig. 3.6). This is suggested in the *Manual of Physical Distancing*,[47] one of the publications, along with *Streets for Pandemic Response & Recovery* (the latter supported by the Street Plans Collaborative, an organization founded by tactical urbanism activists), which focuses on the best emerging design solutions in the public realm for the COVID era.[48] In particular, it highlights the theme of "rethinking streets in a time of physical distance." [49] The short-term scenario is possible through temporary barriers, bollards, and cones that block the access of vehicles. Dining spaces occupy the parking spaces, while the street remains open for pedestrians, cyclists, curbside pickup, or emergency vehicles.

This arrangement could become the first step toward a permanent redesign of the street, by fully removing cars and transforming it into a pedestrian zone; "a continuous promenade for walkers is encouraged through painting the pavement and a variety of dining types encouraged."[50] Vendors and retail can be part of these new arrangements, as well as playgrounds for children and public urban furniture not necessarily related to bars and restaurants (Fig. 3.7).
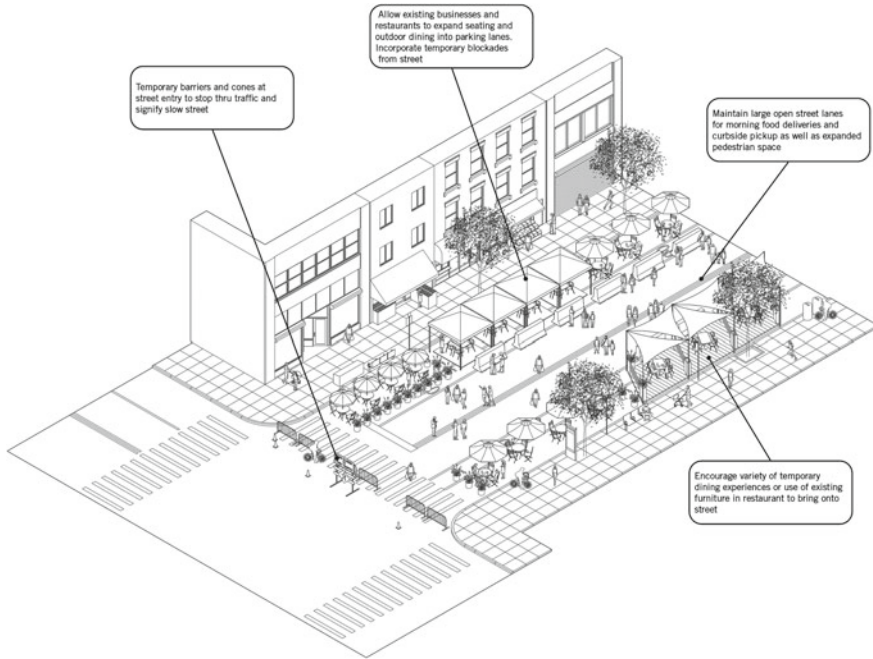
Fig. 3.7 The short-term restaurant street during the COVID-19 pandemic. *Drawing* David J. Lewis, Paul Lewis, Guy Nordenson, Marc Tsurumaki (from *Manual of Physical Distancing: Space, Time, City in the Era of COVID-19*)

We now see, thanks to these informal appropriations and reinventions, that the street has returned to its original character: a collective and inclusive place designed for communal activities and the collective experience of space at the human scale (Fig. 3.8). It allows for "the stimulation and the serendipity of the crowd,"[51] even if physically distanced. Seating spaces and desks, and the free movement on the street, allowed by the absence of vehicles, represent informal appropriations and practices of critique and opposition to the *status quo* of the contemporary city. Even if this happens in a "formal" context (the city designed by plans and regulations), the action is disruptive, because it redefines the role of the street. Modern and contemporary urban planning erased the concept of the "street as domestic interior" and "dwelling place of the collective," as evoked by Benjamin.[52] Or the street as "the public room *par excellence*," narrated by Vidler[53]; as the "life between buildings," in the focus of Jan Gehl's work which ponders the idea of urban design at the human scale.[54] Contemporary urbanism favor a monofunctional corridor designed for the speed of automobiles, in an unfortunate connection between the modernist dogmas and the power of the capital. As pointed out by several scholars and studies, this represents the failure of the idea of a city in which the attention on the architectural "object" led to poorly designed public spaces and the removal of any pedestrian activity from the streets. These notions were transformed by the Corbusian *rue interieur*
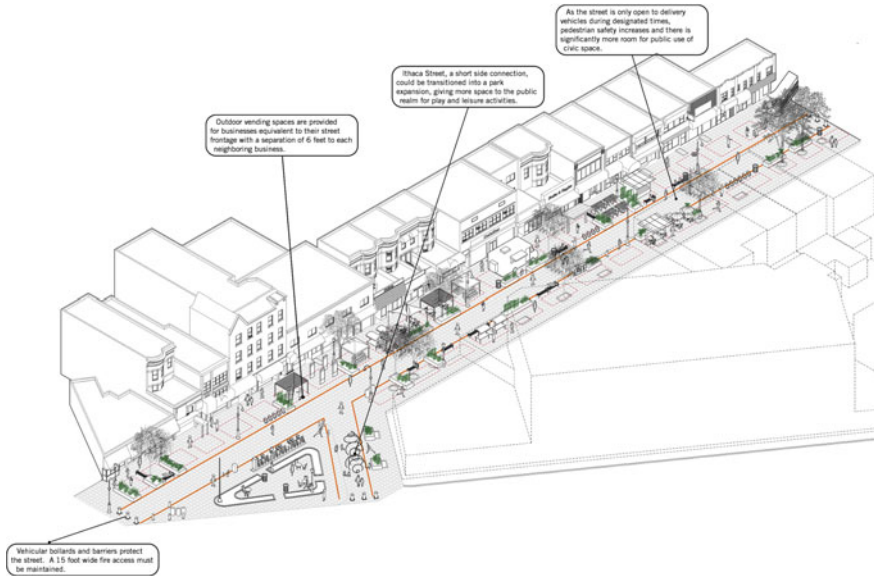
Fig. 3.8 Hypothetical pedestrian street transformation of the case study of 82nd Street, Jackson Height, Queens, NY. *Drawing* David J. Lewis, Paul Lewis, Guy Nordenson, Marc Tsurumaki (from *Manual of Physical Distancing: Space, Time, City in the Era of COVID-19*)

or relocated to the inside of the American mall, emphasizing exclusively vehicular circulation/transportation functions for the street. This is what Carlo Giulio Argan would call *immoral* urban planning which happens when choices are made in favor of the interest and advantage of a specific power or individual, damaging the collective, or facilitating the development of certain functions or areas—paralyzing others.[55]

In my opinion, the Situationist reaction to the formality of space planned from above, the walker's spontaneous critical reinvention of predefined "concept city," the informal interventions, and the attention to the human scale of tactical urbanism; and ultimately, the reappropriations of the urban realm through tactical practices during the pandemic are expressions of the need to repair failures of the formal design strategies of modern and contemporary discourse on cities. Such discourse will allow us to re-think, redesign, and reinvent a human scale "city for people."[56]

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Chapter 4
Milan Potential City: Informality and Resilience in Times of Crisis

Jacopo Leveratto and Francesca Gotti

Abstract In recent years, Milan has confronted unique critical phenomena—exceptional international events, like Expo 2015, and smaller and periodic ones, like Design Weeks—as well as continual migration from the Mediterranean and Syrian war. The city has experienced uncontrolled air pollution prompted by its geographic location, as well as the explosion of the COVID-19 pandemic without comparison in Europe. Nevertheless, Milan has grown, quite surprisingly and in unprecedented ways, to become bigger, greener, safer, and more equal. It has reacted to these events with a remarkable degree of resilience. In this regard, more than its new skyscrapers, Milan has garnered praise for its open spaces—not the monumental ones—but the undefined areas such as railway yards, crossroads, or neighborhood squares. Today, these spaces are working like lungs by allowing the city to expand and shrink according to different needs. They are accepting different uses, functions, and inhabitants to act much like thresholds between the public and the private, the ordinary and the exceptional, and the city and nature. In so doing, these spaces have played an essential role in the urban growth and management of Milan that has largely gone unnoticed. This chapter offers a narrative "cartographic" reconstruction of an invisible urban system based on both human practices and the potential for architecture to accommodate a responsive, mobile, and expandable second city.

Keywords Urban resilience · Social practices · Major events · Socio-economic crises · Pandemics

Today, Milan is much more than a dense and monocentric metropolitan area with over three million inhabitants living on 150,000 ha. It is one of the so-called global cities.[1] It is an international hub that plays a pivotal role in the world economy, thanks to a particular geographical concentration of financial services, multinational

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corporations, major manufacturers, and centers for innovation, media, and communications. Unlike other global cities, however, Milan is not only considered a financial hub, like London and New York, or a political one, like Paris and Beijing. On the contrary, its relevance derives from a capacity to connect the broadest manufacturing area in Europe—Lombardy—with innovative services and creative industries. This network includes both large corporations and small-to-medium enterprises. These characteristics began emerging about seventy years ago during the Italian industrial boom, yet Milan has struggled for decades to consolidate on the global scene due to its peculiar urban structure.

Despite this, Milan was deemed "Europe's Cinderella" in a 2009 *Financial Times* article by Emily Backus. Not only was the city failing against peers like Paris and New York, but it was also unable to keep pace with smaller and less renowned cities like Lisbon and Lyon. This occurred not as a consequence of inferior economic and cultural assets, but because Milan lacked appropriate urban planning and vision. At the time, "despite its industriousness," the city was "saddled with a surfeit of obsolete and ugly architecture, scarce greenery, old infrastructure, intractably tangled traffic, and some of the continent's most polluted air."[2] Its residential building stock was "also in a dire state: … old and, even then, in short supply." Something changed in 2008, when the Bureau International des Expositions decided in favor of Milan to become the venue for its 2015 International Exposition. On the one hand, this set an irrevocable deadline for the necessary infrastructure improvements—it pushed the city government and the Italian state to allocate over ten billion euros of public funds to makeover the city's infrastructure. On the other hand, it advanced the approval of new urban rules for leveraging tradable development rights through which "international investors were offered a clearer picture of what they could get in exchange for their money."[3]

Thanks to the injection of capital, in parallel with the change of rules, urban plans could be carried out. Despite repercussions of the global economic crisis, the city could be transformed from "...a bottleneck city revolving around a tiny downtown into...an integrated network of epicenters of activity."[4] This situation provoked unprecedented construction activities, including some of the most relevant architectural and urban interventions in over half a century. Not only were these improvements related to Expo 2015, such as the area planned by Stefano Boeri, Ricky Burdett, and Jacques Herzog near the newly inaugurated fairgrounds designed by Massimiliano Fuksas, but also a series of projects that had lapsed in limbo for years. These projects included CityLife by Zaha Hadid, Arata Isozaki, and Daniel Libeskind; Garibaldi-Repubblica by Pelli Associates; and Varesine by Kohn Pedersen Fox Architects. The initiative also comprised individual buildings such as Bosco Verticale by Stefano Boeri, the MUDEC Museum by David Chipperfield, and the Fondazione Prada by Rem Koolhaas.

Furthermore, the scope spanned hundreds of uncoordinated and smaller projects which, in ten years, have changed the face of Milan in a radical way.[5] The architectural and urban regeneration of the last ten years has driven a consequential process of economic growth that has been confirmed by renewed attractiveness. The city has also improved in terms of quality of life to become more accessible, safer, and less

polluted. Yet none of these interventions proved essential in providing the city with the capacity of dealing with various phenomena occurring during the same period, starting with Expo itself. The phenomena that confronted Milan, if compared with other cities in the same conditions, show a remarkable degree of resilience that can be explained by the affordance of heterogeneous and multiscale social practices. These qualities are not associated with buildings, but in the structure and quality of open spaces that meet different needs by accepting diverse uses, functions, and inhabitants.

The Informal City in Times of Opportunity

Expo 2015 was a great success for Milan that brought over twenty million visitors to the city. In addition to serving as a driver of new development, it turned the spotlight onto existing assets and thus boosted a resurgence that continues (Fig. 4.1). In 2008, however, this could not have been taken for granted—as former Expo host cities had already testified—in terms of wealth and urban renewal. Seville, for instance, had been left with a considerable housing surplus, while Hanover lost hundreds of millions of euros. Many studies today focus on the potentially devastating impact of major events on host cities, especially when they feature historical urban structures.[6] Yet Milan already had a certain experience in periodically managing this kind of critical inflow. Its Fashion Week, for instance, typically receives some twenty thousand visitors twice per year, while its Design Week can attract up to five hundred thousand attendees in six days.

In this regard, the strategy implemented to mitigate the impact of such events on the historical urban center had always been that of working through diffusion. Despite having strong coordinating structures, the Fashion and Design Weeks were never organized as unique events. On the contrary, given the nature of active stakeholders mostly represented by small and medium enterprises, they were seen as dense constellations of very diverse happenings. These conditions combined into a network of communication and mutual exchange that spanned throughout the city. Furthermore, Design Week has seen the growth of a spontaneous and uncoordinated series of parallel events with an impressive number of grass-roots initiatives. Expo 2015 followed the same logic, implementing a plan characterized by an urban diffusion without similar precedents, as well as a conscious balance between institutional strategies and informal tactics of coordination and management.

A similar strategy is planned for the 2026 Winter Olympics to be held in Milan. The city's decision to host big events, in other words, is not only to create major peripheral hubs to ease the pressure on the urban center. It also seeks to individuate, strengthen, and maintain a network—partly physical and partly immaterial—that improves its critical-node redundancies, while allowing new and unexpected relations to emerge. A network that supports a sort of "pop-up city"—mobile, responsive, and temporally variable—which could develop by adapting "from within" the system of Milan's open spaces, increasingly meant as an autonomous infrastructure. This
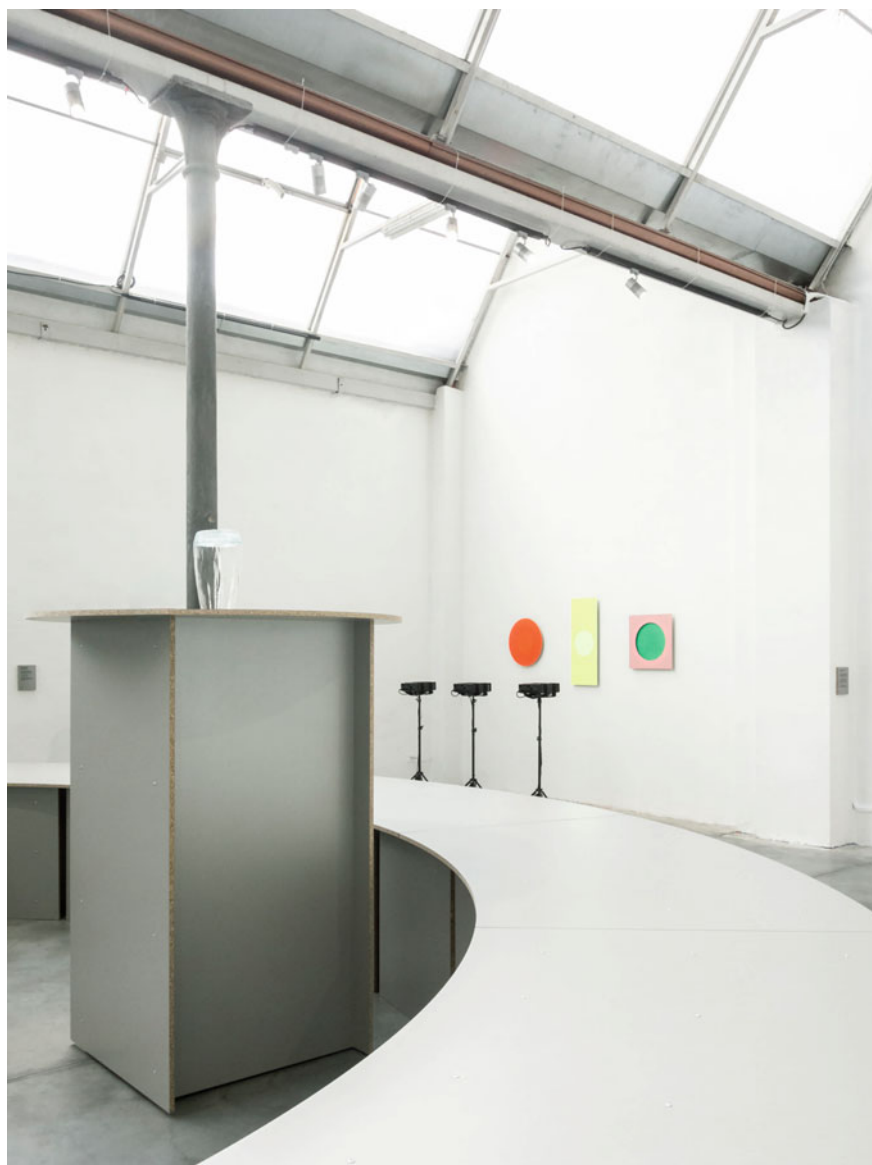
Fig. 4.1 Installation of Dutch Invertuals during FuoriSalone 2019, inside a warehouse of Isola District. *Photo* Giovanni Emilio Galanello

was developed according to different informal responses given to the institutional strategies of coordination, which were voluntarily kept "weak." They produced an irregular urban life pulse that provoked, among other issues, a surge of spontaneous districts for street-food vendors and improvised open-air catwalks, art exhibitions, and social protests all flowing among private courtyards and neighborhood squares, as well as throughout former industrial areas and abandoned railway yards.

The Informal City in Times of Crises

When the global economic crisis broke in 2008, diminishing production burst the national unemployment rate and caused the closure of many small companies. Despite being the wealthiest city in Italy, Milan faced strong financial instability that exacerbated already elevated social inequalities. Accessibility to the housing market and services, spatial segregation, and urban quality worsened, especially in peripheral and multiethnic districts.[7] This crisis was nevertheless an engine to strengthen new and existing strategies of an alternative and self-managed type of welfare system, a network of diffused initiatives moving alongside interventions and investments. Street trading, temporary markets, affordable collectives in abandoned buildings, community centers, and religious hubs were transformed into places to provide mutual help and social cohesion, as well as services for disadvantaged families.[8]

The housing emergency reached its peak in 2015, the year of the refugee crisis. For thousands of people, Milan became the gateway to countries in Northern Europe, and the flow continued during the subsequent years. Milan was not prepared to respond to the housing need; social conflicts related to exclusion emerged across the city (Fig. 4.2). In this context of sudden overpopulation, informal settlements became the direct solution to accommodate refugees. Temporary shelters and services appeared inside residual areas and in-between infrastructures to support the slow process of redistributing people to reception centers.[9] In 2020, the pandemic exacerbated the disparity between the effects of emergencies and the effectiveness of strategic tools. Complex issues—instability of health facilities, closure of collective structures, restricted access to activities, and social distancing—required the city to rethink the entire system of relationships and services. Once more, public spaces served as infrastructure for informal and associational initiatives and venues to provide food, goods, and assistance outside the institutional network.

The informal city has been the protagonist of another critical scenario. In May 2019, Milan was the first city in Italy to declare an emergency, following a string of protests in many public squares and streets. Sustainability plans have been developed over the last ten years, financing research and projects to reduce the impact of urban activities on the environment while promoting greener lifestyles. According to public opinion, these strategies proved insufficient and led to general discontent with demands for more active community engagement. Associations and neighborhood committees have been joining forces to establish short- and long-term actions to

Fig. 4.2 Homeless shelter built under the porch of the Spazio Comune Viale Ortles 73. *Photo* Giovanni Emilio Galanello

deal with environmental crises. Waste reduction, recycling, sharing practices, slow mobility, and preservation of natural enclaves have been core public concerns.[10] These initiatives have played a crucial role both in raising citizen awareness alongside widespread reevaluation of spatial and material resources.

The Affordance of Major Disused Areas

In relation to rising informal urban practices, open areas are obviously the most flexible for different functions and uses. They can be either transformed temporarily with light and ephemeral structures or adapted to different needs without changing much. They are also flexible enough to allow very different spatial interpretations. Yet, it is not always easy to find accessible open spaces in contemporary global cities. Over the last forty years, however, Milan has undergone a process of deindustrialization, shifting from being the largest manufacturing center in Italy, to a centralized hub for the services and information economy (Fig. 4.3). This situation left a large mosaic of urban voids that, because of their size, have struggled to attract redevelopment. These structures include former markets, slaughterhouses, barracks, stables, railway stations, and factories. These buildings compose a geography of abandonment that

Fig. 4.3   The empty buildings of the former slaughterhouse in Via Azzuri d'Italia-Via Molise. *Photo* Giovanni Emilio Galanello

affects both the urban center and its frayed margins, a virtual network of dispersed structures connected by a circuit of abandoned railroad tracks.

However, despite their flexibility, neglected areas are also the least likely to be temporarily reused. Given the high level of coordination required, this leaves few spaces for developing grass-roots initiatives. In the last decade, Milan has benefited from the experience gained with Design Week to manage different kinds of critical phenomena. Over the years, Design Week has privileged former industrial districts and structures to show a good balance between top-down strategies and bottom-up enterprises. This phenomenon could drive both the reactivation of entire urban sectors and the incubation of innovative social practices. In consequence, the municipality decided to follow the same path when dealing with other kinds of issues, favoring this sort of concertation among different stakeholders within a coordinated network. During Expo 2015, new informal food districts appeared along the disused railroad, absorbing an exponentially increased flow of people. The same spaces, that on other occasions were used as shelters for the homeless, were later used as tourist sites, venues for concerts, refugee camps, and temporary COVID-19 emergency hospitals. Following a progressive re-naturalization process, these crises offered the opportunity of an informal and unplanned green lung for the city, as well as an incubator for biodiversity.

In summary, during the last ten years, major voids and a coordinating network have been essential in avoiding devastating impacts on the city. Seen retrospectively, the lack of redevelopment initiatives has been beneficial. Allowing the city to grow and shrink according to different needs, either planned or unplanned, these spaces work as upscaled "safe spaces" for heterogeneous practices and communities, and thus as a fundamental risk infrastructure. This is probably why public, free, and open spaces have gained more and more relevance both in the debate about renewal and related projects. Crises have shown their necessity to a model of development that, despite looking at public space, has never considered redundancy a crucial factor.

The Affordance of Neighborhood Public Spaces

In Milan, big investments have concentrated in the major financial and shopping areas of the city, aiming to create large, multifunctional complexes and landmark public squares. Less resources have been directed to secondary residential districts, while the urban quality in marginal contexts has not significantly improved. Feeling excluded and forgotten, communities started demanding better conditions; they began to independently organize to compensate for lack of services and attention. Neighborhood public spaces have become the place to express these collective needs and to activate multiple initiatives such as new or reformed streets, alleys, squares, courtyards, allotments, and gardens. Various spaces have been reclaimed through a wide range of activities such as community gardening, street festivals, sport groups, and sharing resources. During the pandemic, these places played a key role in supporting marginalized groups with food and goods distributed along reactivated alleys and

passageways. During the lockdown, these places were "rediscovered" for neighborhood gatherings in spaces like courtyards, galleries, and arcades that suddenly became places of intense sociability (Fig. 4.4).[11]

Fig. 4.4 The courtyard of a house in Giambellino neighborhood, in Via degli Apuli. *Photo* Giovanni Emilio Galanello

The potential of neighborhood public spaces derives from their capillarity and site specificity. They are characterized by a reliable scale that can be directly appropriated by people. They facilitate local communities in building a sense of belonging and attachment which contributes to stronger social bonding. Their proximity to residential areas makes them more likely to be used frequently by the same groups of people who tend to congregate there by reiterating their distinctive social rituals. Promoting the quality of these places means fostering positive civic behaviors and ensuring the safety of the surroundings. Because of their spatial and social qualities, this diffuse system of secondary public spaces requires relatively low-budget interventions comprising mostly maintenance and light infrastructure.

In recent years, the reappropriation of public spaces has produced a series of small-scale projects that show the feasibility and efficacy of informal regeneration processes. Self-built temporary installations, murals, and urban gardening are some of the most diffused actions gathered under the definition of tactical urbanism. Since 2015, Milan began supporting diffused public actions such as the Piano *Quartieri* program (2018) and *Piazze Aperte.* Significant funding went into transforming neglected infrastructures and leftover spaces into new squares.[12] At the same time, participatory regeneration initiatives have grown across the city, such as *La Città Intorno* by Fondazione Cariplo. These projects focused on creating collaborations between citizens, associations, and public institutions that foster community empowerment, cultural education, and self-management through care for urban commons.

Tales of a Railway Yard

Over the last decade, one of the most extraordinary "basins of resilience" of Milan's urban center was the railway yards of the urban circuit. In the early 2000s, these spaces were mostly abandoned. Part of this intervention was Porta Romana, which has been a strategy for both crises and events in a careful interplay of informal social practices and tactics of occupation (Fig. 4.5). Beginning in 2005, the municipal government and railways signed a framework agreement for the transformation of disused railway areas and redevelopment of the Milanese railway system. The process continued in 2009, when a specific urban variant determined the possibility of building around one million square meters of mixed use in those areas. Due to some changes in urban regulations, the project slowed down until 2016. The prolonged phase of consultation with local actors and partial withdrawal of the railway company resulted in a space that lay dormant for almost ten years.[13]

Porta Romana was among the largest and most important aspects of the proposal, and its story is particularly interesting. From 2000 to 2015, the abandonment of the former railway facilities allowed a process of re-naturalization of the area. This process transformed it into a huge and entirely wild urban forest that triggered new forms of informal occupation. Given its proximity to the city's largest shelter, hundreds of refugees, homeless, and nomadic people found a temporary space among

Fig. 4.5 Porta Romana railway yard, seen from the bridge on Via Giuseppe Ripamonti. *Photo* Giovanni Emilio Galanello

abandoned structures and dense vegetation. Despite poor hygienic conditions, they incrementally built new communities and forms of political representation. In 2015, coinciding with Expo, the municipality decided to give life to a new kind of pop-up city. This placed an international food village in the yard; the space incorporated within the urban center some of the activities related to the universal exposition. After its closure, waiting for its renewal, part of the area became a temporary venue for musical events of a local community center.

This form of tactic reappropriation of Milan contributed to reopening the debate about possibilities for the railway yards. In 2016, after a thorough study conducted by Politecnico di Milano, the railway company decided to start a participatory workshop led by five internationally renowned architects. This effort opened discussions on specific issues such as interconnecting areas, design of green spaces, and increasing social housing stock. Drawing on that experience, two years later, it announced the first international competition for the redevelopment of the area. In 2020, however, a sudden and unpredictable crisis asked again for a space of decompression. Part of the Porta Romana yard was used to welcome a hundred hosts of an adjacent homeless shelter and, thus, to comply with social distancing measures imposed by the COVID-19 pandemic. Meanwhile, in the same year, the area was considered as the site of another design competition for the 2026 Olympic village. Even though the outcomes

of this transformation are still undetermined, they are likely to give a central role to the public, free, and open areas that have been impacted by many events.

Tales of a Square

As mentioned above, *Piano Quartieri* was originally called *Piano Periferie*, an integrated program of regeneration for peripheral areas of Milan. The name was changed as it was recognized that problems affecting the outskirts of the city were diffused in central areas. These areas witnessed a massive process of decay in public residential stock, urban spaces, facilities, and infrastructure. These issues were linked to the economic insufficiency and intense pressure caused by migration that resulted in frequent episodes of illegal occupation, evictions, and conflicts. Among these districts, Corvetto has been in the spotlight for years. Numerous promises to "restyle" it officially have been made to the media. In the early 2000s, urban quality and living conditions began improving through efforts such as *Contratti di Quartiere* and *Scuola dei Quartieri* (2014–20).[14]

In 2008, the district experienced a tactical urban intervention that transformed a squalid triangle of concrete with few trees into a proper square, Piazza Angilberto II. The site has been individuated in the context of a broader research, aimed at finding spaces with the potential to trigger larger transformations. The project is the result of a participatory process involving local associations, neighborhood committees, and university students. These actors were engaged in the material realization of the works, organization of events, and site-specific performances. The creation of murals, urban furniture, and mobile greenery was received as a strong communicative gesture: the recognition of the collective identity of the place and the successful reclaim of the public city by the community. Piazza Angilberto II is a symbol of the long-term commitment of a network of actors and institutions that have been active in the neighborhood for years. Citizens are now asking to transform the temporary changes into permanent improvements. Furthermore, during the sanitary emergency, the square has become a reference point for initiatives of mutual aid guided by local committees and a meeting place for young people and elders (Fig. 4.6).

The project involved the creation of bike paths that slowed traffic areas. Parking lots were removed, and more surface was given over to pedestrians. Nevertheless, positive effects have raised complaints from retail owners and drivers, such as those prompted by similar projects in other parts of the city. In the short term, their impact might have been perceived as negative for certain sectors; but in the long run, they are contributing to a better quality of life for a broader range of people. Situated changes can influence major systems; negotiation of secondary public space can have strong power in this process.

Fig. 4.6   Piazza Angilberto II, Corvetto neighborhood. *Photo* Giovanni Emilio Galanello

Conclusion

Since 2008, Milan has experienced unparalleled growth. The process was a combination of public and private investments with a strategic change of urban regulations. These efforts boosted the real estate market and increased international visibility. Repeated and extremely impactful critical phenomena have benefitted from an unplanned and informal system represented by its urban voids. An invisible, mobile, and expandable second city made of a myriad of safe spaces has been working as a latent risk infrastructure for urban growth. This has been determined not only by the affordance of its interstitial structure, but also by the interplay of strategic actions of planning and informal tactics of occupation. It is a circle of progressive refinement, starting from diverse social practices and then consolidating into an ephemeral physical structure.

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Chapter 5
The Mathematics of an Ideal Village

Edward Mitchell

Abstract The terms that the profession of architecture sets for itself, its autopoesis, have been limiting factors in addressing the problems of the informal city. The term "informal city" in itself is also a limiting factor, separating the urban sectors of the ungoverned and undercoded areas of the city against the central civic organization. Challenges to normative planning and urban design models after World War II led to three specific challenges: incorporation of new models of complexity into urban understanding, theories of the traditional city, the non-plan within architecture, and the rejection of the "concept" in the fine arts and political theory. The vestiges of these debates have only recently been accounted for in architecture, as the profession tends to maintain its disciplinary language, making it indifferent to forces impacting a large sector of the world population. New tools and practices may lead to a more comprehensive and complex analysis of the city that can include the transient conditions of contemporary urbanization.

The apparent limits of architecture to address the poverty and deprivation of the informal city are daunting. The United Nations claims that over 1 billion people currently reside in informal settlements, roughly 12% of the world population. Of that group, 80% reside in three regions: East and Southeast Asia (370 million), Sub-Saharan Africa (238 million), and Central and South Asia (227 million). That percentage fluctuates. The population living in slums worldwide declined by 20% between 2000 and 2014, and the proportion grew to 23.5% in 2018.[1]

The phrase "informal urbanism" inadequately describes a pervasive condition that is ostensibly the opposite of the formal city, something that is to be rectified or cured. UN-Habitat defines informal urbanism as "the production of urbanization *independent of formal frameworks* and assistance."[2] Interestingly, this definition does not distinguish between migrants, refugees, squatters**,** and those developers

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who ignore regulations in their quest for profit. For developers, regulations are often seen as a hindrance that requires additional investment, even though codes, zoning, and design qualities can guarantee future investment and more predictable outcomes on adjacent parcels. Rules and codes lead to organized and structured behavior. However, for the urban poor, the lack of regulations is regrettably predictable, a testament to the vulnerability of this segment of the global economy, the victims of political upheaval associated with war, environmental catastrophe, and predatory capitalism. Rather than the opposite of formal urbanism, the conditions of the various shantytowns, favelas, or barrios are intricately bound to the operations of the official economic and political forces of the city.

Instead of offering solutions to the problem of incorporating the informal city into the fabric of the center, this chapter offers other means of understanding the issue and briefly elaborates on how the institutionalized language of architectural production has been limited by the use of the term "informal." If the world's informal settlements were "independent of formal frameworks," why is the material palette and the apparently chaotic physical resolution of poor neighborhoods—from Mumbai to Lagos to Rio de Janeiro—surprisingly similar? While there are differences, and important ones at that, the improvised housing stock in many areas of the world's impoverished urban sectors is constructed of the same corrugated steel sheets, blue woven poly tarps, one-gallon plastic containers, five-gallon drums, milk crates, and wood pallets that embody the discarded packaging of global trade. Add to that the world's most ubiquitous design object, the plastic Monobloc chair, and the material script of components making up informal urbanism is nearly complete. That chair, produced worldwide in China, Taiwan, Israel, Mexico, the United States, and elsewhere, sells for approximately US$3.50 and can be produced every 70 seconds. Its durability and price point make it a virus that has infected most of the world's interior spaces.[3] If "informal urbanism" was "independent of form and framework," we would expect to see more variation. Moreover, when and if the world as we know it ends, its geological record will likely not be the relics of the twenty-first-century city's steel and glass, but a collection of plastic artifacts from its favelas and slums.

When we make a common distinction between "form" and "not form" or the "informal," we do two things—we set one sector of world cities and peoples of its economic strata in opposition to the other, reflecting the conflicted political status of these two territories. We also remove these issues from the professional discourse and traditional operational modes of architecture. The informal has been situated outside of architecture's conventional fields of representation. But the urgency of the global situation refutes the limits imposed by this binary opposition. Informal urbanisms, particularly those associated with massive migration, are not independent of formal frameworks; the operational lore of architecture is not limited to the tradition of understanding form as an outcome of geometric constraints. The informal and formal parts of cities are interrelated; one cannot exist without the other. The neo-liberalism that drives architectural practice, the strategies of urban investment, the politics of what and whom is represented, and the ethics of the market produce everything from the business district to the shantytown. Whether the schisms can be solved by architecture is not the point. Instead, this chapter traces complications that have made

architecture impotent at best, or willfully indifferent to the problems of the informal city.

Codes in architecture, as they are for developers, are sometimes hindrances and limitations. A design code can restrict the expressive qualities of a building, anchoring it to rote visual precedents and reinforcing specific histories and systems of representation. Codes can be aesthetically and politically repressive. But codes are also the generative systems that regulate building performance, govern local relationships, or replicate aesthetics to visually unify and discipline a neighborhood or district. Codes determine the style of the design solution. While style is not limited to the surface reading of an object, it also determines the methods in which problems are solved. Without belaboring the point, codes have been the self-governing feedback systems that constitute the profession and discipline of architecture. One cannot have discipline without rules, a classical architecture without geometry and orders, a gothic architecture without structural expression and aesthetic motifs, or a modernist architecture without rational expression of structure, primary volumes, and the use of modern building materials. Architecture is commonly taught as a primer of rules—points, lines, and planes; or models and copies—that establish the conceptual basis for design, while the legal and technical determinants of form are brought into the mix to govern design outcomes. At the root of the conceptual basis lies the problem.

Architectural design methodology, while predominantly concerned with the geometrical organization and control of social and physical spaces, has a history of taking on conditions that once seemed informal and brought them into the disciplinary vocabulary. Architecture evolves. Eclecticism in the nineteenth century, historicist postmodernism, collage in its modernist and post-modernist iterations, and Deconstructivism, which evolved from the project of collage, each laid claim to the incorporation of design solutions outside the stricter rules and codes of preceding methodologies. Formal operations are a process of iteration and improvisation, and as the collective eye becomes accustomed to new modes of representation, motifs evolve. What is visually challenging in one period, or what might be construed as outside the boundaries of acceptable form, becomes the general design solution of the next generation.

Equally, one might conclude that the limits of the term "informal" might be, in part, a symptom of an underlying assumption of freedom opposed to the fixed conditions that characterize architecture. For example, we would readily accept that formality is the product of fixed rules, restricted actions, and the governance of acceptable responses to a given set of activities, while informality is associated with the idea that "anything goes"—that one response is as good as another and that social relations and organizations are "casual." Take, for example, formal and informal attire. Formal attire might be associated with a uniform, or a form that unifies the look of individuals, whether that be military attire, a sports jersey, or a tuxedo. On the other hand, we hold assumptions of what "informal" attire might be, whether it be no jacket and jeans on a Friday at the office, or shorts and sandals on an airplane. Both behaviors conform, they go with a form, rather than assuming one has form and the other does not.

The second condition of the informal is attributable to temporality. Architectures of nomadic tribes, itinerant work forces, transnational migrant workers, or camps, up until recently, have gone unrecognized. The casual "look" of these architectures, their position outside of the political realms of power, and the marginal nature of these communities is tied to an aesthetic that would seem to fall outside the bounds of the relative permanence attributed to architecture. However, contrary to common perception, many of the refugee populations of the world find themselves in a permanent state of crisis. The 17.6 million Syrians affected by the civil war have been refugees for over a decade. Moreover, the flows that put populations into motion have required architects, economists, ecologists, and politicians to confront problems under new paradigms.

Making easy distinctions between informal and formal attributes limits not only aesthetic production and systems of representation, in which architecture contributes, but also the political conditions of city-making. The citizens of the informal city are often unaccounted for and also lack representation. The informal would, by definition, seem difficult to define. So, before tackling the limitations of the term "informal urbanism," it might be easier to establish what we mean by the structure of the formal city. Streets, blocks, and property platting with their distinct edges of curbs, sidewalks, walls, fences, or hedges mark territory and property. In addition, the network of utilities that transgress those bounded conditions including power, water, and waste removal systems are the necessities of a formal urbanism. Informal areas of cities and the countryside characteristically lack those resources, while the forms of inhabitation lack the political power and identity associated with property. An informal urbanism then, if it is useful as a category of analysis, would presumably have few or none of the attributes of the city proper. Yet even the most erratic slum or favela is not without its architecture.

While there are traditional nomadic peoples, the concern in this discussion is with the conditions imposed by modern urbanism. One cannot conceive of the conditions of the informal city without recognizing that modernization produces disenfranchised populations. Modernism shed the constraints of traditional culture for legitimate reasons, shifting one code for another set of values. Traditional values were overdetermined, products of customs and myths; architectural modernism and urban production would be determined by scientific analysis to evaluate efficiency and functionality. Planning, in essence, established a more rational determination of values and methods to organize urban space. Older urban forms definitively had meaning, whether that be political or religious or the shared values of customary practice. Meaning in the modern "concept" city would be the product of the economic values of the working city. Michel de Certeau identified the emergence of the modern city as the rise of the "Concept-cty" that he defined by three operations: the production of its own space that represses all physical, mental, and political pollutions that compromise it, the substitution of a synchronic system for the resistances of tradition, and the creation of a universal subject.[4] In de Certeau's terms, the Concept-city was universally applied, suppressing systems of difference in favor of a universal and unified solution to the problems and operations of the city.

Critics tied similar observations to the imposition of an abstract, Cartesian spatial system. This action leveled traditional hierarchies and allowed for the coordination of economic systems of property, the tabulation of wealth, and the network of infrastructure that enabled investment and growth of emerging global markets. As the spatial systems of capital became more ingrained into the cultural and political landscape, the overwhelming breadth and scope of the systems themselves constituted a powerful construct that could overwhelm comprehension. What amounted to a new man-made sublime, comprehensive and totalizing in the eighteenth century, had become by the latter half of the twentieth century a system whose ubiquity, scale, and colossal effects on society were disempowered by discrete political actions and resistance. Efficiency, "called for integral unification and simplification, for the removal of all "waste," the avoidance of all detours, it called for radical coordination."[5]

Facing a system so vast, critics questioned the agency of the individual, who nonetheless was posited as a free economic subject. But with the devastation of Europe after the war, in architecture and its companion disciplines, the universal model of the Concept-city and the nefarious principles of modernism were put into question. Critics had already begun to ask what forms of agency might challenge the new status quo. In 1941, Herbert Marcuse, for example, remarked that society is an "objective entity" when people experience the antagonism between collective and individual interests. Society appears as architecture does it not?, "consisting of numerous things, institutions, and agencies: plants and shops, business, police and law, government, schools and churches, prisons and hospitals, theaters and organizations, etc.[6] "Society is noticed chiefly as a power of restraint and control, providing the framework which integrates the goals, faculties, and aspirations of men."[7]

Rather than fall back into a hopeless romanticism of the nineteenth-century individual, Marcuse speculated that a new subject would arise that would work with the emerging technologies. Instead of a utopia or perennial happiness, Marcuse questioned any permanent solution, and he offered that an individual's "transitory character will be accentuated when the concern for the human being is no longer mingled with fear for his material existence and overshadowed by the threat of poverty, hunger, and ostracism."[8] Marcuse went on to question how current models of thought could account for paradigm shifts. Changes in scientific systems were attributed to "eureka" moments and accidents in the lab that were the fortuitous discoveries of mad geniuses. But the idea of the attribution of change to the accident was clearly insufficient.

As stated earlier, codes deliver formal frameworks, the tools of formal urbanisms. They are deployed to replicate past events. Codes, it could be said, are also time machines—they allow us to ostensibly go back in time and repeat results. Traditional cultures are based on cyclical time—seasonal changes and myth. Agricultural practices, religious calendars, and the situation and determination of subjectivities, mostly patriarchal, are systems of representation. In traditional culture, it is a repeatable mode based on past practices that, if it evolves, does so gradually when circumstances—environmental, geological, and other natural forces—change. While we can identify "events" in traditional culture, they are either repetitions or rituals or they are actions of one world transgressing into our own divine events "outside of time." Change results in the demise of one tradition and its replacement by another.

Modernism is one of those epochal changes. But, though the modern city and its models rejected tradition, its universal systems aspired to permanent, universal solutions, the ones that Marcuse questioned. There is a schism in modernism. To be modern is to be of the now, while modernism's urban and political forms were predominantly utopian, driven to fixed universal solutions.

Whether in traditional or modern culture, the reasons for deploying codes are justifiable (defensible in every meaning of that word as legal but also one with an architecture) and sound (sturdy, reliable, based on solid footings). Laws establish modalities of practice so that past successes can be repeated and past errors reduced. Codes establish language. Grunts and groans turn from "animal" noise to communication. If I grunt every time I point to a piece of fruit, one can assume that the utterance has significance. Through shared repetitions, we establish a common usage; repetition can make anything seem like a rule. Cognitively, we recognize things because we have seen them before. Is the informal city something we recognize in architecture?

Marcuse advocated for rejecting the old idea of the romantic individual and wondered whether answers might be constructed that would move beyond the ties of the subject to the idea of property. Through technology the individual might develop his or her own passions as new tools were being developed. Three of these are relevant to challenges to the formal/informal dichotomy and, by implication, beyond the ideas of a universal subject and a model of finite, stable, and isolated spaces that defined the "Concept-city" and design methods established in the modern period. Immediately after the war new models of complexity stirred the architectural imagination. In the arts, a related question arose about the limits of conceptual art and its conservative connection to a priori or protocol languages.

In modern scientific theory, one way to recognize and make events predictable is to reduce them to their simplest form. The common example of this method is the collision of pool balls on a table. While the collision of multiple balls would seem difficult to forecast, we can reduce our analysis to single collisions and make accurate predictions of the future position and velocity of two pool balls. According to mathematician Warren Weaver, this is the model of simplicity. More complex models and multiple collisions were analyzed as disorganized complexity and their outcomes—similar to operations of the insurance industry—made as probability statements. The new model, an organized complexity that Warren articulated, was capable of greater accuracy based on simple rule sets and feedback systems. Rather than seeing "informal" patterns, Warren and others offered models that could be simulated with the emerging power of computation.

Two early theories of complexity in architecture have had implications on our understanding of the city. The differences in the models are worth noting. Christopher Alexander wrestled with design methodology modeled on the logic structure of computation. However, in his study of traditional villages, he reduced complexity to a formulaic recipe by breaking down decisions into finite elements all of which are referenced back to precedent. So while the potential for genuine complexity exists in the method, the reductive notion of a code in effect became, in design practice, another form of collage. Rule sets in his system were codified into set pieces that were stitched together into an architectural assemblage. Nothing new is emergent

within the model, only a "timeless way of building." Conventions are maintained, revealing the humanist roots of his argument. In *Notes on the Synthesis of Form*, the logical structure of the design problem is reduced to a set of branching logics, beginning with broad choices and working toward fine grain decisions. Although his mathematics describe a complex set of interdependencies, the essential design diagram remains a tree structure, not the rhizomatic structure of a complex feedback system. While he would later write that a city is not a tree, the methodology sketched out in *Notes* still conforms to the logic of an arboreal diagram.

The other key figure, Jane Jacobs, had the advantage of an analysis over a "design." Her criticism of master planning, which referenced Warren's work, is never tasked with a design solution. Instead, she astutely observed the complex behavior of urban life. She described the "ballet" of actors as events taking place in time, constantly shifting and fluctuating, where customary actions—street safety, garbage removal, and car parking—play out as part of an evolving social contract contingent on multiple factors. Significantly, her home turf, Greenwich Village, was not offered as a model to be copied, frozen within an ahistorical framework. Any performative urbanism, she noted, has the potential to fail on its own relative success and lose its vitality.[9]

Manuel De Landa was one of the several writers who took up the issue of complexity theory in the 1990s and expanded upon aspects of Jacob's work. He proposed that some cities were structured by rigid geometric control while others were self-organizing systems. Commercial cities, he stated, were the latter, "connected to the self-organizing processes of the seas and oceans."[10] He used two terms to describe Western urban dynamics, turbulent and autocatalytic, and attributed these self-organizing principles to stages of emerging markets. After World War II, he stated, hierarchical command elements and a decrease in self-organizing components were the result of large corporations, "planning systems' and "anti-markets." Rather than operating "far from equilibrium," Western capital—according to de Landa—went into a negative feedback system. Without going further into the conflicts of the argument, de Landa might be construed as complicit with the newly emerging ethos of late twentieth-century free market capitalism that dominated the neo-liberal agenda.

The second post-war challenge to planning paradigms came directly from the architectural community as the methods, referents, and fundamental premises of the modern city were questioned. The examples in this category are too numerous to list, but a new generation of practitioners that would include Team X, La Tendenza, the Texas Rangers, and certain members of the intellectual circle around the Institute for Architecture and Urban Studies incorporated local and traditional modalities into their urban design models. The historic city was resuscitated via analysis and re-evaluation. Critical Regionalism offered examples, what will later be referred to as "micro-political" activities, as resistance to ubiquitous capitalist development, while the neo-liberal rejection of the plan by Reyner Banham and the New Society critics embraced a free-form, unrestricted hedonism based on the emerging subculture that aligned with the more predatory practices of high octane, profit-driven development. Of these varied critiques, Banham's non-plan with its agenda of self-organization and neo-liberal economics has had the closest alignment to complexity and emergent

urbanisms. Banham can be given some credit for anticipating the potential problems posed by freewheeling capitalism in emerging markets. As he wrote of the "gas-powered pastoral" of the immediate present, it would take a "radical theorist" to "range freely over departmental barriers and disciplinary interfaces. He came back with a comprehensive historical account of the rise of portable gadgetry, deducing from it some informed projections of the good or evil future it affords."[11]

The third source for rethinking problems of form is more indirect and comes from discussions in the art world. Rosalind Krauss, a contributor and one time editor for *Opposition*s, published by the aforementioned IAUS, wrote an important piece in *ArtForum* in 1973. Her essay, "Sense and Sensibility: Reflection of Post '60s Sculpture,"[12] rejected the art history method of measuring a work in relationship to past works of art (i.e., the tradition), and she called out a second problem, posed initially by Duchamp's Readymades, and championed by a loose affiliation of "Conceptual" artists lead by Joseph Kosuth. Kosuth stated that "a work of art is a tautology in that it is a presentation of the artist's intention. Thus, that it is art is true *a priori.*" Krauss attributed this position as an extension of the abstract Cartesian space of Western picture-making.

In a brilliant argument, Krauss connected the idea of conceptualism to the idea of a seemingly neutral space in which the passage of objects from one state to another—the passage of urinals from the toilet to the gallery in the case of Duchamp, and by implication, buildings in case of the Renaissance or Modernist city—as similar operations. New work, the post-60s sculpture which she was describing, represented a new method of art making:

> And clearly, the meaning of an attempt to undermine illusionism cannot be dissociated from the baggage that Western picture-making carried along with it. It is a rejection that inherently implies the disavowal of the notion of a constituting consciousness, and the protocol language of a private Self. It is a rejection of a space that exists prior to experience, passively waiting to be filled; and of a psychological model in which the self exists replete with its meanings, prior to contact with its world.[13]

Conceptual Art, for Krauss, represented a tautology. Conceptual Art was defined by the author, "It's art if I say it is so." Krauss argued that this relegated art practices to a private language—what logical positivism calls a protocol language—"sense-impression, mental images, and private sensations."[14] The new work, represented by Frank Stella, Mel Bochner, Richard Serra, and others, recorded materially specific events, events that could not be anticipated prior to their construction. For Krauss, these were public moments enacted in time. Rather than driven by the Concept, what had become a passage from one spatial protocol to another—the toilet to the gallery in the case of Duchamp—the new work proffered, against the traditional configuration of frame and event, activities that were all events. That "space," dismissed as "theatrical" by high modernist critics like Michael Fried, was a development Krauss embraced.

One of the quintessential examples of the new work was Serra's cast lead pieces, activities driven by gerunds, "to throw," "to drop," etc. Although the action of slinging a ladle of molten metal (shades of Jackson Pollock) against an existing floor and wall is a relatively simple activity, the relative inaccuracy of the repeated gesture,

the flaws in the wall and floor, and the material response of liquid metal contributed to differences in outcomes. A reasonable prediction could be made, but, given the range of possible results within that limited scope of activities and materials, no two castings would be alike. Krauss would later refer to these works as "informe," or the formless. But the argument she made in "Sense" suggest a possible departure from the idea of a finite and abstract notion of space that effects how we might understand the city, not as a metaphoric chess board on which pieces are moves about, but rather as a dynamic complexity of evolving space-events.[15]

Krauss's criticism of Conceptual Art is similar to De Certeau's criticism of the Concept City. The Concept City, like the concept in art, was also conceived as a "space" that existed prior to buildings, people, and events. In the art world, the gallery or museum stood for the physical manifestation of both institution and model of thought that preceded events. In modern architecture, this a priori condition is manifested in the utopian projection of a tabula rasa. It is reinforced by the superposition of the grid in which the objects and actors of the city take positions and reinforce hierarchies of power and control. One could even extend the analogy to the present. Contemporary city-making is more often than not reduced to populating the urban landscape with a menagerie of "signature" buildings, manifestations of Rem Koolhaas's City of the Captive Globe, an abstract, gridded space where all ideology is erased. There might be architecture, but the politics of those urban activities are repressed.

There are instances where the idea of what constitutes "conceptual" work is questioned in architecture. Bernard Tschumi wrote extensively about the idea of the event, and his Diploma Unit at the AA in the 1970s, who named themselves the London Conceptualists, explored the possibilities of what those art world questions meant for architectural practice. The group, which included Wil Alsop and Nigel Coates, would push against the boundaries of practice in its quest for a "Conceptual Architecture." Tschumi struggled between an architecture that was "a product of the mind" and the sensual nature implied in his students' more radical spatial practices. The unit's investigations culminated in the exhibition Tschumi co-curated with Rose Lee Goldberg, "A Space: A Thousand Words" where the invited artists, with hints of de Certeau, were asked to present thoughts on the "production of space." The prompt elicited a range of responses. On the one hand, some of the work dematerialized architecture in the use of documented data and information, whereas the artists that Goldberg showed promoted the spatial "materialization of the concept."[16]

The term "conceptual," in this exhibit, vacillated between the dematerialized work Krauss spoke against and a more visceral, performance-based notion of space that took advantage of the derelict buildings and urban politics of 1970s London. By including the performance-based work, the London Conceptualists' show offered competing ideas between event-based political performances and data-driven futurism. In that way, the show differed from other important exhibits that preceded it like the computationally based work exhibited in John Weeks' 1968 *Cybernetic Serendipity* show at the London ICA or work in Nicolas Negroponte's *Information Art,* at MIT, curated by Jack Burnham in 1971, which included the work of Kosuth, Les Levine, and Hans Hacke.[17]

Graham Shane reviewed the London Conceptualists' exhibit, ignored the artists' contributions which he called "decadent antidotes," and focused on architecture's relationship to technology and "the machine images of efficiency and impersonality." Architecture still maintains this schism between data-driven "conceptual" thinking and a performance-based "conceptual" definition. The purpose of tracing the roots of this division serves to situate the prevailing debate between data-driven analysis and the "informal" or "informe" aesthetics. Until recently, data-driven methods and the local, political actions of Jacob's street ballet and the radical actions of the London Conceptualists remained separate camps. This is sometimes a division between those involved in the abstract nature of systems and those involved in human-scaled activities and actions. But later, in *Recombinant Urbanism*, Shane noted that the systems revolution forecast in the 1970s were no longer limited by the question of the scale of investigation. Today, he noted, increased computational power allows designers to move from detail to global extrapolation.[18] The implication is that assumptions which distinguish between the formal and informal, or between the "state" and the "people," are no longer useful. As Shane has also remarked, there are two major developments that contribute to what we have been calling informal urbanism, the emergence of the sprawling megalopolis caused by petroleum and the metacity, a term coined by MVRDV, the complex information network formed by satellite sensors, GIS systems, and Web software.[19, 20]

Up until very recently, we assumed that events—the occurrences of material activities in real time—could not be coded. The eventful act is not easily recoverable—which is the role of history writing and precedent. Instead, it is unique. Lead hits a corner differently every time it is cast. If every event, or any unique action, could be entered into a database which would make no single action or event fundamentally different from another, the conventional notion that an event requires a law, code, or formal framework to be measured is no longer necessary. Without doubt, there are still effective ways of working and designing in the informal city. There are numerous examples of relative success in bringing the informal into the formal framework, either through upgrades to local fabric, or by tried and true efforts that improve public infrastructure.

However, we retain the logic of the code, or the belief in the efficacy of codes. Codes, whether manifest in the laws governing urban form or in the data that is constantly collected by our inputs, conscious or unconscious, human, or otherwise, are directed toward the prognostication of an expected future outcome whether a snow storm or a market trend. If specific patterns emerge, then we expect specific outcomes. Anything outside of predictable patterns of behavior appears chaotic—and perhaps this might constitute the realm of the informal. We fail to see the informal city because it appears unpredictable, yet its ubiquity contradicts that impression, while the state of one-eighth of the world's population seems nothing but inevitable. To recall Marcuse's plea, need we be reduced to ineffectiveness in light of the scope of the crisis?

Despite the increase in computational power, many architects maintain the shibboleths of the tradition. Anything outside the conventional systems of architecture's

protocols is outside of architecture. Patrick Schumacher, in the *Autopoiesis of Architecture*, builds upon several philosophical theories, including the work of Niklas Luhmann, to make the case that architecture has its core competencies, what he calls autopoesis, the self-generating feedback system that determines the discipline's organization. He distinguishes architecture, just as he does other professions, from the infinite complexity of its environment. While the organization of the discipline evolves, it does so within the limits of its internal principles and logics.

Schumacher distinguishes political from architectural systems, and, though he recognizes relationships between the two, he posits that a functioning society is characterized when:

> Art, science, architecture, education, and even mass media are released from the burden of becoming vehicles of political expression. The more this system consolidates, the longer this division of labor within society works smoothly, the more false and out of place rings the pretense of "political architecture."[21]

Quoting Le Corbusier's famous dictum, "Architecture or Revolution. Revolution can be avoided." Schumacher reasons that, in times of revolutionary politics, an architecture, presumably one whose core competencies remain stable, is not genuinely possible. Architecture, according to this logic, arises in a period of relative political stability when society "works smoothly."[22] Architecture is an expression of quasi-stable order within the social system, and it is only then that its *autopoiesis*, its feedback system, comes into play. For Schumacher, the same holds true of political speech and actions. These are the realm of the professional political class, separate and distinct from that of architecture. While acknowledging the political rhetoric of key twentieth-century modernists, Schumacher believes that the symbolic gestures and programmatic interests reflective of those claims acted as an "irritant" to the practice of architecture.

To enforce his position, Schumacher claims that in the twenty-first century, there is a "political vacuum," willfully ignoring the enormous changes that have taken place across the globe, even as the forces of late global capitalism transform cities, ecologies, and political structures.[23] On the other side of the scale, he dismisses the idea attributed to the work of Michel Foucault—of micropolitics, the diffuse and decentered practices that contest the dominant political order in which critical architecture lays its claim. This claim dominated academic discourse in a previous generation and manifested diverse architecture from Critical Regionalism to Deconstruction.[24] Schumacher rightly speaks to the more obvious problems of political architecture, noting Koolhaas's formal elision between the architecture of the Soviet avant-garde and American corporate architecture, the disavowal of the politics of architectural production. But this conveniently excuses any criticism that has been made of his work when he was a partner with Zaha Hadid. And while that discussion has its controversies, it is, for this essay, more provocative to think about how the tools Schumacher deploys might operate at the microlevel and imply the macropolitics of the twenty-first-century city.

All of which is to suggest that the idea of an "informal city" as opposed to the "formal city" tends to operate, often with great effect, at bringing the informal into

the territory of the formal. This is not such a bad idea. Projects like the Favela-Bairro program in Rio de Janeiro which improved services and upgraded infrastructure, the public works projects in Medellin, Colombia, or MAS's work in Africa, for example, remain within the core competency of the profession. But in order to address the ad hoc settlements of China, one would need to address the structure of the welfare system; in order to make design improvements to the physical attributes of the globe, one would have to redesign the Monobloc chair to make it ecologically sustainable and inexpensive. If we accept the idea that cities are events as much as spaces, then information systems become more vital to practice. Cities can become the highly coded apparatus for capital investment and government security. Scripted urbanisms, like the apps which dominate our taste cultures, can also be repeatable, reified, and commodified for profit. Or, if we choose to ignore the "irritants" of the politics of these parts of the city, they will remain as accidents or the refuse, the informal if you will, of the dominant global systems.

If the informal city is an "irritant" to architecture, there are several examples of practices that have engaged in inventive research, analysis, and design that impact how we might address pressing issues. Those include Estudio Teddy Cruz + Fonna Forman, who combine the talents of an architect and a political theorist on projects like their housing in Mexico and work with the NGO Casa Familiar in San Ysidro, or their "Political Equator 3: Border-Drain-Crossing," a political action that resulted in an engagement with Homeland Security and Mexican Immigration about transnational migration patterns; Tatiana Bilbao's efforts working with several universities to understand larger political forces like NAFTA that have had tremendous effect in impoverished villages in Mexico; and Tatiana Bilbao Estudio's work on the problems associated with the formal urbanization by Infonavit which gave rise to their efforts to provide new housing prototypes in Angangueo.[25] It includes Kieran Timberlake's work with GerHub and UNICEF in Mongolia which studied the effects of coal-burning in the traditional gers and made recommendations for modifying the traditional housing for nomadic people. It applies to their ongoing study of water resources in Dhaka, as well as attempts to produce concrete wall panels that use less material and operate at high energy performance based on the unit's morphology and chemistry. Such projects could transform building practices across the globe from Egypt to India. In a more speculative mode, the *Geographies of Trash* by Rania Ghosn and El Hadi Jazairy of Design Earth studied the politics of waste systems and their impact on cities. One could link their research to the more ironic work by MVRDV, or even earlier speculations by historic geographers like Alexander von Humboldt, as they try to break down dualities between "wilderness" and "wastelands," terms coined by historian and philosopher of science, Peter Galison. In all cases, "waste" and the complexities of transience, that which was cognitively if not actually eliminated by modern urban theory, are the ground of productive actions.

In each of these cases, the expertise of the team of architects and designers is joined by the skills of the data analyst, geographer, political scientist, and material engineer to give form to complex solutions. These offices do not concern themselves with preserving the protocols of architecture. Nor do they settle for simple dichotomies in thinking of the contemporary city. It has been said before that we are all nomads,

whether the computational tools available will consume us all or lead us to new passions and forms of compassion remains to be seen. "Appetite is never excessive, never furious, save when it is starved."[26]

Endnotes

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Chapter 6
Assembling Informal Urbanism

Hesam Kamalipour

Abstract Forms of informal urbanism, ranging from informal settlement to informal street vending and informal transport, have become integral to how cities work, particularly in the context of the Global South. This chapter outlines an emerging research agenda to explore the ways in which forms of urban informality work in relation to each other and urban formality in a global context. The research agenda primarily focuses on the intersections, overlaps, synergies, and contradictions between forms of informal settlement, informal street vending, and informal transport. It also engages with the spatiality, sociality, and temporality of the relations between forms of informal urbanism across different scales and contexts. Following an introduction to forms of urban informality, this chapter discusses emerging research and reflects on how assemblage thinking can be adopted as a theoretical lens for exploring forms of informal urbanism in a global context.

Keywords Urban informality · Assemblage · Informal settlement · Street vending · Informal transport

Forms of urban informality have become integral to how cities work, particularly in the context of the Global South. Informal urbanism incorporates a range of activities that often take place beyond state control. Informal settlement, informal street vending, and informal transport can be considered as primary forms of informal urbanism. Building upon the recent work on forms of informal urbanism, this chapter discusses emerging research to explore the ways in which forms of urban informality work in relation to each other and urban formality in a global context.[1] It points to a range of research gaps and further reflects on assemblage theory as a toolkit for thinking about how forms of informal urbanism work, and what they can do across different scales and contexts.

The greatest challenges for urban futures can be found in the cities of the Global South.[2] One must look hard and closely at cities in the Global South where forms of

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Fig. 6.1 Forms of urban informality have become integral to how places are being made, unmade, and remade, particularly in the Global South. City: Pune, India. *Photo* Hesam Kamalipour

urban informality play a key role in how places are being made, unmade, and remade by many, including the ordinary (Fig. 6.1). Forms of informality are by no means limited to the Global South. It is also critical to avoid conflating informal urbanism with emerging forms of temporary and tactical urbanism. Temporary appropriations can be organized through informal or formal processes.[3] Making a distinction between "desire" and "need" is then critical.[4] Forms of informality are here to stay, although they often remain invisible.[5] The aim here is not to adopt pessimistic or optimistic approaches to informal urbanism, but rather, to set forth an agenda to explore how forms of urban informality work in relation to formality in a global context.

Forms of Urban Informality

The concept of informality can be linked to the study of informal urban income and economic activities in Ghana by Hart.[6] Urban informality is a multidimensional and complex concept, which is difficult to accurately define.[7] This essay begins from the view that informality does not simply take place in a vacuum or in isolation from forms of urban formality. Exploring the relations between informal and formal in cities is then critical. For Altrock, the informal/formal relations form a hybrid arrangement.[8] Informal and formal may also intersect as urbanism often incorporates a mix of informality and formality across different scales. At stake is to avoid making a binary distinction between informal and formal in exploring the process of urbanization. Lizarralde points out that making a binary distinction is simplistic

as the boundaries between informal and formal are often blurry, and the associated perceptions are, by and large, context-specific.[9]

As Roy argues, urban informality can be understood as a way of "producing and regulating space" and informality cannot be simply considered as synonymous with poverty.[10] For Simone, it entails a capacity to move beyond the imposed order.[11] Urban informality is also the realm of order with the capacity to remain adaptive and responsive to meet the needs of people.[12] It is characterized by flexibility and micro-scale entrepreneurial activities.[13] For McFarlane, it is more of a practice than a labor categorization.[14] Nevertheless, the term "informal" does not mean lacking form.[15] Informal urbanism incorporates different forms of informality ranging from informal settlement to informal street vending and informal transport.

Informal settlements accommodate about one billion people worldwide.[16] As a verb, informal settlement has become at once a critical way of urbanism providing affordable housing for many, including the urban poor and rural-to-urban migrants, and one of the key challenges of urbanization (Fig. 6.2). Informal settlements are here to stay, and they cannot be simply addressed through ruthless practices of forced eviction, demolition, and displacement. Many informal settlements can be incrementally upgraded on the same site. The in-situ and incremental upgrading of informal settlements relies on a sophisticated understanding of the spatiality of these settlements. There is an emerging body of knowledge focusing on the morphologies and incremental transformations of informal settlements.[17] Informal settlement has been a line of inquiry in urban planning, social sciences, geography, and development

Fig. 6.2 Informal settlement as a primary form of informal urbanism in relation to the formal city. City: Caracas, Venezuela. *Photo* Hesam Kamalipour

Fig. 6.3 Forms of street vending appropriating the public space. City: Medellin, Colombia. *Photo* Hesam Kamalipour

studies, among others, often with a focus on the conception of urban informality and a critical engagement with the dynamics of governance and the underlying socio-political processes. However, the spatiality of these settlements and their micro-scale dynamics of change and adaptation have remained underexplored. Also, little is known about the ways in which forms of informal settlement are related to how informal street vending and transport work across different scales and contexts.

Informal street vending is a widespread form of informal urbanism that takes place in the public realm. Forms of street vending vary in terms of timing, remuneration, scale, workforce, location, and types of services and goods.[18] Public space is inevitably the arena of negotiation and contestation, accommodating a range of competing claims and forms of appropriation (Fig. 6.3). Exploring the relations between informal and formal plays a significant role here as there are complex relationships between different agents in public space. There are also different forms of informal street vending that negotiate visibility and space to sustain livelihoods in the public realm.[19] While there is an extensive body of knowledge focusing on informal street vending across different contexts, the spatiality of informal street vending has remained underexplored in the relevant literature. There is an emerging body of knowledge exploring different types of informal street vending.[20] Informal street vendors select their locations in relation to a range of considerations, including pedestrian flows.[21]

Informal transport is also a key form of informal urbanism that is integral to the ways in which urban mobility works in cities of the Global South. In addition to its capacity to facilitate everyday mobility, informal transport also provides job opportunities for the urban poor and low-skilled migrants.[22] Forms of informal transport are provided by a range of vehicles across different contexts. The vehicles are often

Fig. 6.4 Informal transport temporarily appropriating the sidewalks. City: Bangkok, Thailand. *Photo* Hesam Kamalipour

registered, yet they are not formally authorized to provide transport services.[23] They have the capacity to offer on-demand transport services with reasonable fares, address the gap of the formal public transport services, and adapt to the changing demands.[24] They can also transgress the codes of the formal city, maneuver through congested traffic, and temporarily appropriate sidewalks and laneways to remain competitive in relation to formal modes of transport (Fig. 6.4). The spatiality of different forms of informal transport and their competition with formal modes of transport for the access network have remained underexplored.[25] Little is also known about how forms of informal transport negotiate their visibility as well as their spatial and temporal appropriation of the public realm.

Emerging Research Pathways

Much of the research on informal urbanism has engaged with forms of informal settlement, informal street vending, and informal transport in isolation and often separated from each other. While there is an extensive body of knowledge focusing on informal settlements, informal street vending, and informal transport as specific research topics, exploring the relations between different forms of informal urbanism across scales and contexts remains a significant gap (Fig. 6.5). Emerging research in this regard can expand to include the relations, intersections, overlaps, synergies, and contradictions between forms of informal settlement, informal street vending, and informal transport. It can further engage with the spatial, social, and temporal aspects of the relations between different forms of informal urbanism across scales

Fig. 6.5 Exploring the relations between different forms of informal urbanism as an emerging research agenda. City: Mumbai, India. *Photo* Hesam Kamalipour

and contexts. There also remain notable gaps in the relevant literature that can be explored further, particularly in relation to the evolving field of urban design.

A sophisticated understanding of urban morphology is crucial for better design interventions.[26] It is important to note that design intervention cannot be simply reduced to forms of aesthetic upgrading in the context of informal urbanism. Roy argues that reductionist approaches to upgrading with an emphasis on aesthetic aspects can be considered as "aestheticization of poverty" as they often confuse poverty with informality.[27] Exploring morphogenesis and generative processes has been a key theme in urban design thinking.[28] Engaging with generative codes and socio-spatial patterns has also been a relevant theme with a focus on traditional cities and vernacular settlements.[29] As informal settlements often emerge through generative processes of self-organization and become consolidated over time through adaptive and incremental processes of change, much can be learned from analyzing how urban morphologies, adaptations, and informal codes play out in these settlements. This is particularly at stake, given that certain upgrading practices seem to be incompatible with adaptive forms of urbanism.[30] Learning from what works in informal settlements is the key to rethink how city futures can be imagined by providing a nuanced understanding of the related generative processes and codes.

The role of urban form in relation to how different forms of urban informality work across cities has remained underexplored in the literature on informal urbanism. The morphologies of informal settlements have also remained understudied.[31] Forms of informal street trading rely on urban public space to sustain livelihoods. While place works at the intersections between spatiality and sociality, the spatiality of informal

street vending has remained underexplored in the literature. Forms of informal transport often compete with formal modes of transport for the access network.[32] Nevertheless, the spatial and temporal aspects of the ways in which forms of informal transport use the access network and appropriate different parts of the public space in relation to formal transport have remained understudied.

Studies on forms of informal urbanism have often focused on specific contexts and/or scales. There is an emerging body of knowledge drawing on evidence from different contexts with a focus on forms of informal settlement.[33] While analyzing forms of urban informality can considerably benefit from multiscalar thinking, little is known about the relations between formal and informal across different scales. The dynamics of place identity and politics of visibility have also remained relatively understudied in the literature on informal urbanism. The visibility of informal settlements to the gaze of tourism has become an emerging topic of research.[34] The ways in which different forms of informal urbanism can become visible or invisible to the gaze of the formal city, among others, have remained underexplored. There is a complex relationship between forms of informal street vending and their visibility in public space.[35] Urban mapping has the capacity to unravel how visibility works in relation to what is constructed as the formal city.

Assemblage Thinking as a Theoretical Lens

Assemblage thinking can work as a toolkit to provide a better understanding of how different forms of informality and informal/formal relations work across different scales and contexts.[36] Adaptation and change are integral to how forms of informal urbanism work in urban environments. As a theoretical lens, assemblage thinking can shed light on how forms of informal urbanism work and how adaptive processes of change play out across multiple scales. In this part, I primarily build upon the works of Dovey on assemblage thinking in relation to urban design and informal urbanism.[37]

Assemblage thinking can be traced back to Deleuze and Guattari.[38] It has been developed as a body of theory by DeLanda.[39] It has also been adopted by Dovey in the context of urban design and place thinking.[40] A broader conception of assemblage has also been articulated in the actor-network theory.[41] It has been further deployed in the context of urban studies.[42] Assemblage thinking has been applied in urban geography to contribute to social-spatial theory and rethink how cities work.[43] There are various interpretations and applications of this concept as a theoretical framework across different disciplines.

Assemblage thinking is primarily about the relations between parts and wholes across scales. Assemblages are characterized by the relations between parts rather than the properties of the parts.[44] In this sense, assemblage, as a whole, cannot be reduced to any of its parts while it can constrain and enable them.[45] It cannot also be considered as the sum of its parts. Assemblage thinking is primarily about differences rather than similarities. Heterogeneous parts generate assemblages.[46] Assemblages

claim identity and territory.[47] They also include both the actual and the possible.[48] Assemblage thinking is against forms of reductionism, such as reduction to essences and social constructs.[49]

Assemblages are continuously made and unmade between the two primary axes of expression/materiality and territorialization/deterritorialization.[50] Each axis resonates with a set of twofold concepts. The axis of express/material is about the relations between sociality and spatiality in place. Assemblages address how inseparable relations between sociality and spatiality are established in cities.[51] The axis of territorialization/deterritorialization is about the ways in which forms of identity and territory are made and unmade. It resonates with a range of other twofold concepts, including tree/rhizome, hierarchy/network, striated/smooth, and formal/informal.[52] The processes of emergence and consolidation, as well as eviction and eradication in the context of informal urbanism, can be considered as ways of inscribing new territories or erasing the established forms of territory.

Conceptualizing informal/formal relations has become a key theme adopting the lens of assemblage thinking.[53] While formality is about how tree-like structures and hierarchies can produce a striated space, urban informality is about the ways in which rhizome-like structures and networks can generate a smooth space. This can be linked to the distinction made by De Certeau between strategies and tactics.[54] Formality primarily includes the strategies of the state while informality generally encompasses the tactics of ordinary citizens. In this sense, informality is about what Bayat calls the "quiet encroachment of the ordinary" in the context of the everyday practices of ordinary individuals.[55] Assemblage thinking also sheds light on how formality and informality fold into each other. The formal city may also become informalized while informal settlements become formalized.

Conclusion

This chapter discussed emerging research to explore different forms of informal urbanism, ranging from informal settlement to informal street vending and informal transport, in relation to, rather than in isolation from, each other. It also pointed to a range of gaps that should be further explored in studies on forms of urban informality. Academia and practice can more effectively engage with forms of informal urbanism in relation to forms of urban formality by undertaking comparative explorations across different contexts and scales. These explorations can study the spatiality of informal urbanism in relation to sociality, adopt a multiscalar approach, and examine the dynamics of visibility and place identity, among others, to further advance the body of knowledge on informal urbanism. This is by no means considered exhaustive as forms of urban informality cut across a range of disciplines and professions.

This chapter further discussed how assemblage thinking might be adopted as a relevant theoretical framework to explore the ways in which forms of urban informality and informal/formal relations work across scales and contexts. Theories such as assemblage thinking can work as tools and offer lenses for looking closely at

cities. However, they cannot be considered as ends or goals in themselves. Assemblage thinking can offer tools for thinking about how forms of informal urbanism work in cities. In what follows, I highlight some key points in relation to informal urbanism and forms of urban informality. The first point is about the significance of adopting multiscalar thinking and integrated approaches to upgrading and urban transformation. At stake is to explore how changes at given scales can be most effectively analyzed in relation to larger and smaller scales. Any design intervention at a given scale cannot simply take place within a vacuum and remain blind to the network of relations to smaller and larger scales. Another point is about the processes of territorialization/deterritorialization in relation to sociality and spatiality in place. Understanding how territories are made, unmade, and remade in relation to spatiality and sociality in the context of assemblage thinking is the key to exploring how the dynamics of change, adaptation, and informal codes work in relation to different forms of informal urbanism.

A significant contribution of assemblage thinking to the studies of place is the inseparability of spatiality and sociality.[56] Informal urbanism is also a way of making, unmaking, and remaking places. The task, then, is to consider the relations between spatiality and sociality in exploring forms of urban informality. The other key point is about how reality incorporates both the actual and the virtual. In other words, the virtual can be considered as a part of the reality that has not been actualized yet. Assemblage thinking is against different forms of reductionism. Reducing the reality to the actual can also be considered as a form of reductionism. It is then critical to avoid reducing place to the actual and excluding what DeLanda calls the "space of possibilities" in this regard.[57] The reality of informal urbanism includes not only the actual forms of informality but also a range of possibilities concerning a place in the process of becoming.

Informal urbanism is a form of multiplicity, and forms of informal urbanism are in the process of becoming. At stake is to critically engage with how informal urbanism emerges and what forms of urban informality can do rather than to merely focus on what informal urbanism is. Forms of informality are often unfinished in the sense that they are open, complex, and adaptive in relation to emerging possibilities. This is a productive capacity that can be understood in contrast to the ways in which the built environment professions often engage with the production of some fixed and rigid outcomes.

Becoming in the context of informal urbanism is primarily about change and adaptation rather than moving from a fixed status of being to another. Becoming informal is arguably in sharp contrast to the long-standing desire of the built environment professions to produce and maintain stable place identities. The aim is not to argue for replacing top-down with bottom-up processes, but to explore the possibilities for harnessing the adaptive capacities of urban informality at the intersections between formal and informal. The agenda discussed in this chapter attempts

to outline future research pathways to explore the relations between informal urban assemblages across different scales and contexts.

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Chapter 7
Informalizing Yugoslavia

Gregory Marinic and Dijana Handanovic

Abstract Informal urbanization is often viewed as being confined to the Global South, and yet informal approaches to building have existed across the globe in various forms throughout history. Although formality and informality are often understood as binary concepts, current discourse increasingly sees these conditions as both parallel and synergistic. In Southeastern Europe, informal urban occupancies and land use practices increased significantly in the 1990s when dramatic political and economic changes swept across the region. During the Yugoslav Wars, mass migration from rural areas to urban centers burdened governments that were unable to meet the surging demand for infrastructure and housing in Sarajevo, Ljubljana, Zagreb, Belgrade, Podgorica, Skopje, and Pristina. In the early post-socialist years, informalization impacted metropolitan areas as people in the former Yugoslavia confronted simultaneous challenges related to warfare, natural disasters, ethnic conflict, marginalization, and poverty. At the same time, destabilized governments could not facilitate a regulated and orderly land tenure process. These forces placed unprecedented pressures on both the housing stock in capital cities and resort hotels along the Adriatic coast. This chapter examines informal urbanism in the former Yugoslavia by casting a lens on socio-political conditions and settler geographies in Bosnia-Herzegovina, Slovenia, Croatia, Serbia, Montenegro, North Macedonia, and Kosovo. It surveys diverse spatial configurations and building typologies that have evolved in the region since the 1960s through recent years.

Keywords Yugoslavia · Informal urbanism · Informality · Settlement · Housing · Southeastern Europe

Informal urbanization is typically viewed as being confined to the Global South, and yet informal approaches to building have existed across the globe in various

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forms throughout history. Although formality and informality are often understood as binary concepts, current discourse increasingly sees these conditions as both parallel and synergistic. More than 50 million people within the 15 member states of the United Nations Economic Commission for Europe (UNECE) live in informal settlements.[1] Rapid urbanization, lack of access to land, declining home ownership, limited social housing, and poverty have led citizens to build homes illegally under precarious environmental circumstances.[2] The United Nations claims that this phenomenon is growing at an exponential rate and calls for urgent legal, political, and planning solutions that align with its Sustainable Development Goals.

In Southeastern Europe, informal urban occupancies and land development practices may be grouped into three historical periods in the twentieth century—the time between the two world wars, the post-World War II era until the collapse of the Eastern Bloc, and the post-socialist years after 1991.[3] Informal practices increased significantly in the 1990s when dramatic political and economic changes swept across the region. During the Yugoslav Wars, mass migration from rural areas to urban centers burdened governments that were unable to meet the surging demand for infrastructure and housing in Sarajevo, Ljubljana, Zagreb, Belgrade, Podgorica, Skopje, and Pristina. In the early post-socialist years, informalization impacted metropolitan areas as people in the former Yugoslavia confronted simultaneous challenges related to warfare, natural disasters, ethnic conflict, marginalization, and poverty. At the same time, destabilized governments could not facilitate a regulated and orderly land tenure process. These forces placed unprecedented pressures on both the housing stock in capital cities and resort hotels along the Adriatic coast.

This chapter examines informal settlements in the former Yugoslavia by casting a lens on socio-political conditions and settler geographies in Bosnia-Herzegovina, Slovenia, Croatia, Serbia, Montenegro, North Macedonia, and Kosovo. It discusses diverse configurations of informal urbanism that have evolved since the 1960s, identifying differences among the independent states which formed after the break-up of Yugoslavia. This research focuses on five primary types of informal settlements found throughout the region including squatter settlements, appropriated buildings, refugee camps, illegal suburbs, and Romani encampments.

Unraveling and Recomposing

Since the late 1990s, several UNECE countries with economies in transition have made transformational changes in land use policy and the allocation of state and private assets. This shift toward new housing and land management systems has compounded many other socio-economic challenges.[4] Across Southeastern Europe, lack of transparent processes for property rights and land tenure has exacerbated the housing crisis, while ineffectual bureaucracies and economic stagnation have further catalyzed the growth of informal settlements. Given that urban planning reforms were established a decade after the fall of communist regimes, it is no surprise that informal settlements currently house 30–50% of the total population in the capital

cities of Southeastern Europe.[5] These configurations include squatter settlements on public or private land, settlements for refugees and vulnerable people, upgraded squatter settlements, illegal suburban land subdivisions on public or private land on the urban fringe, and substandard housing without adequate facilities within city centers or densely urbanized areas.[6]

Several factors converged to shape the geography of informal settlements in the region. These include arcane authorization processes for home improvements, absence of regulatory codes, failure of municipalities to adopt pro-growth planning, lack of land policies that support tenure rights, absence of aid in the transition from centrally planned to market economies, and failure of state agencies to implement economic reforms.[7] The intersecting impacts of these conditions have led to the dramatic growth of informal settlements across the region.

Throughout the former Yugoslavia, informal settlements can be categorized as those that emerged during the socialist era and those that were established after its dissolution. Informal settlements that formed during the communist era were associated with the swift rise of urbanization during the 1960s and 70s, while those built in the 1990s housed economic migrants, refugees, and displaced persons.[8] For instance, post-socialist settlements are mostly built and inhabited by middle class families rather than the working poor. And while some informal settlements invoke images of poverty, exclusion, and despair, there are many examples where this is certainly not the case. Nevertheless, a long-standing misconception equates informal housing with substandard dwellings. As Ananya Roy asserts, however, informal urbanism is a multidimensional form of spatial production that should not be conflated with poverty.[9] Underscoring this reality, informality in the former Yugoslavia is generally associated with a lack of urban planning and building permits, rather than the quality of its housing stock. (Fig. 7.1) Here, housing ranges from rudimentary multi-family compounds to luxurious single-family villas. Furthermore, illegal construction is largely traced to an unclear system of property rights and the intermittent enforcement of regulations, and should not be broadly conflated with substandard construction quality.

The many Yugoslav conflicts and corresponding influx of refugees exponentially enlarged the informal settlements of Sarajevo, Zagreb, Belgrade, Podgorica, Skopje, and Pristina. For example, informal settlements represent 40% of the population living in Belgrade.[10] Informal settlements are even more common in Sarajevo and Pristina because ethnic-cleansing forced people to flee from rural areas to cities within protected territories.[11] Displaced persons often settled in peri-urban areas where they built ad hoc houses on unimproved lots.[12] Many settlements grew through illegal land occupation, yet some residents have since secured land titles to their homes. Most of these communities have not been demolished; water, sewage, and electricity are provided, and many have been added to official master plans. Residents of informal settlements in the former Yugoslavia region not only face economic obstacles, but also social and environmental challenges. Those who live in the most informal of these socio-spatial configurations often lack access to good schools, clean water, public transit, and reliable electricity. Consequences stemming from the absence of

Fig. 7.1 Illegal suburb in Zagreb; *Photo* Gregory Marinic

basic infrastructure not only impact the residents of informal settlements, but also the ecology and quality of life of entire cities.

Informal Conditions

This research surveys five primary types of informal settlements found throughout the former Yugoslavia. These include squatter settlements, appropriated buildings, refugee camps, illegal suburbs, and Romani encampments. These types reflect significantly different socio-economic conditions across the independent countries that emerged after the break-up of Yugoslavia. These configurations are unevenly distributed at varied densities across the region. For instance, Slovenia has experienced very little informal urbanization in the post-socialist era, whereas the inverse is true for Bosnia-Herzegovina, Croatia, Serbia, Montenegro, North Macedonia, and Kosovo.

Squatter Settlements

Largely established in the 1970s, squatter settlements were built by rural residents who migrated to cities and illegally occupied vacant land. This flow was primarily a consequence of changes in socialist national policies and the economy of the former Yugoslavia. Many squatter settlements were built in precarious areas on steep topography or within floodplains, while others occupy indeterminate zones under bridges, near expressways, or on space by railway stations, industrial zones, and landfills. Residents of squatter settlements often face eviction and demolition; however, tolerance toward these communities has increased in recent years. Even so, the media casts squatters in widely divergent ways ranging from noble citizens to violent criminals. The press variously sympathizes with their plight, engages in exclusionary rhetoric toward marginalized people, or waxes nostalgic over the strict rule of law under socialism.[13]

Displacing squatter settlements comes with significant risks to those who are among the poorest members of society. Due to various overlapping regulations and noncompliance with planning norms, residents often lack building permits; however, de facto legality is implied because these settlements have not been demolished. The incremental legalization of housing in squatter settlements assures the right for people to remain in their homes through actions including secure tenure, as well as the socio-spatial integration of communities into municipalities and other systems of the formal city. Legalization usually results in infrastructural upgrades, yet it often fails to integrate residents into broader socio-economic and political systems.

In Skopje, the capital of North Macedonia, about 120,000 people live in squatter settlements.[14] (Fig. 7.2) Over 320,000 people, nearly 15% of North Macedonia's total population, live in illegally built housing, while roughly 12% of its total housing stock is classified as substandard.[15] The squatter settlements of North Macedonia developed in response to many pressures including poor housing stock inherited from the socialist era, migration from rural to urban areas, and lack of affordable housing in city centers. Socio-economic issues in Skopje contrast significantly with the countryside where abandoned housing stock is a widespread phenomenon. In the post-socialist era, homeowners' associations and mechanisms for building maintenance have been largely abandoned.[16] Non-Roma squatter settlements of Skopje are found near the city center and across the metropolitan periphery. These settlements contain a mix of housing types ranging from tent-like and other temporary structures to houses of good quality construction sited on legally owned land. Squatter settlements are considered illegal because they were built on taken land without formal urban plans and building permits. Although legalization remains doubtful, few demolitions have taken place and societal tolerance prevails.[17]

Fig. 7.2 Squatter settlement with upgraded housing in Skopje, North Macedonia. *Photo* Dijana Handanovic

Appropriated Buildings

Squatting in the former Yugoslavia has a long history and takes many forms. Among the most common is the appropriation of derelict existing buildings without the permission of an owner. From the 1960s onwards, squatting was found across Yugoslavia so that by the 1970s, half of all private housing construction was illegal. These indeterminate areas were subsequently addressed by the *Black Housing Law of 1972* which sought to regulate squatter housing. During that time, squatters were largely employed and not among the poorest members of society. Squatting was caused by many reasons including poor governance, bureaucratic regulations policies, and lack of affordable housing.

The appropriation of buildings by artists can be viewed as a consequence of shifting reactions to political phenomenon across three distinct historical eras. In the 1970s and 80s, urban transformations in the former Yugoslavia reflected the apogee and waning years of socialism. The periods during and immediately after the Yugoslav Wars, as well as in the post-socialist era, show new motivations for appropriation. These years reveal contrasting approaches to housing and spatial management from the top-down, along with associated reactions from marginalized people from the bottom-up. In the case of artist collectives, changing power dynamics are reflected by increased activity in building appropriation as a form of resistance.

In Slovenia, the northernmost and most developed region of the former Yugoslavia, informal urbanism did not become a widespread phenomenon in the

post-socialist era. From a historical standpoint, its built environment has been closely aligned with Austria since the fourteenth century when most of the Slovene lands passed under Habsburg rule.[18] Likewise, Slovenian culture was shaped by ongoing influences from its Germanic, Latin, and South Slavic neighbors to create a blended, Central European identity.[19] During the socialist era, Slovenia—with its developed economy and high quality of life—was viewed as the exception within Yugoslavia.[20] After independence, Slovenia has been defined by a series of firsts: It was the first Southeast European country to join the EU, the first post-socialist state to join the eurozone, and the first in the region to switch from borrower to donor status at the World Bank; it outperforms the rest of the region on most human development indicators.[21] Reflecting these socio-economic differences, squatter settlements in Slovenia reveal patterns common to other parts of Europe such as Christiania, a self–governed informal settlement established within a squatted military barracks in Copenhagen, rather than those in areas of the former Yugoslavia.

Squatting in Slovenia has been used primarily by artists as a tactic to appropriate space for use as an ideological utopia. Most common of these types is the artist live-work collective that engages the public as a cultural forum for alternative practices. Two prominent artist squats in Ljubljana include the Metelkova and the Republic of Rog. Built in 1911 by the Austro-Hungarian Army, Metelkova is an artist commune that was once a military barracks consisting of seven buildings sited within a 1.2-hectare compound. The Yugoslav military used the site until 1991 at which time it was abandoned once Slovenia attained independence. Shortly thereafter, the compound was appropriated by squatting artists who transformed it into a center for alternative visual and performance art. In 1993, the Slovenian government attempted to demolish the barracks but was met with resistance by nearly 200 protesting artists, activists, and sympathizers. The Slovenian government eventually succeeded in demolishing two buildings in the compound, but the rest remain a rebellious artist community whose buildings are covered with psychedelic murals, graffiti, and sculpture.

The Republic of Rog was established on the eastern edge of central Ljubljana in an abandoned factory (Fig. 7.3). The Rog factory produced bikes until 1991 when production stopped because of the Yugoslav conflicts. Although Slovenia's departure from Yugoslavia was less contested than the other constituent republics, associated ethnic conflicts and insurgencies of the ensuing Yugoslav Wars continued to unfold just beyond its national borders. The Rog factory complex was squatted in 2006 and named *Rog*. The occupiers declared themselves as a self-managed art and social center that hosted lectures, concerts, and refugee support events.[22] The artist-occupiers proclaimed, "As a non-formal network of individuals, we believe that our actions are completely legitimate and well-grounded, although at the moment, lacking official permission."[23]

Rog was used by many groups including Nevidni delavci sveta (Invisible Workers of the World), Antifašistična fronta (Antifascist Front), and the Anarcho-Queer-Feminist Collective. It housed a medical clinic for asylum seekers, skate park, circus space, football pitch, artist studios, graffiti workshop, and art galleries.[24] Since its inception, Rog has been continually in conflict with the municipality. In January 2021, the City Council of Ljubljana evicted Rog and ordered people to leave the

Fig. 7.3 The republic of Rog was based in the former Rog bicycle factory in Ljubljana, Slovenia. *Photo* T. Bonač

site. The city government of Ljubljana plans to repurpose the former factory into a cultural center, tram terminus, and tram depot called *Rog Centre.*

Refugee Camps

Refugee camps throughout the former Yugoslavia continually ebb and flow through migration; their spatial morphologies share similarities with squatter settlements. Most, however, have been sanctioned with government permission to serve as temporary homes. And although refugee camps are a temporary solution for many migrant families, these places often become long-term dwellings. In Serbia, Kaludjerica is among the largest informal settlements in the former Yugoslavia region. Located about ten kilometers from Belgrade, it has grown steadily over the last 30 years by accommodating shifting flows of refugees and other migrants from Bosnia-Herzegovina, Croatia, and Kosovo. Kaludjerica was established with no master plan but through the creativity of its residents who sought to maximize the land use of their plots.[25] Today, this neighborhood is home to 50,000 residents with one main street and a single school. Informality and lack of planning are most evident in its urban form. There is a discernable lack of street uniformity as evidenced in differing street widths—some are unpaved and as narrow as a bike lane, while others have no sidewalks. Houses are closely sited, and many do not have façades. The greatest

problem in Kaludjerica is the lack of sewage and water systems. This refugee camp-turned-settlement is currently included in the Belgrade master plan and should be legalized within the next six years; regularization, however, remains unlikely.

In Bosnia-Herzegovina, the Vucjak refugee camp (Fig. 7.4) near Bihac forms a temporary home for Syrian migrants. It was established to address overcrowding at Bihac's two main refugee accommodation centers at Bira and Miral. Bihac is geographically close to the northwest border with Croatia where Syrian refugees often wait to cross into the EU. Vucjak reflects the Bihac municipality's inability to house a near endless flow of migrants. In November 2019, local police rounded-up Syrian refugees from the town center of Bihac and took them to a new camp at Vucjak.[26] Authorities placed roughly 700 male migrants into the ad hoc camp which sits on top of an old landfill ten kilometers west of town. City officials poured a layer of dirt and gravel over the site before relocating migrants.

Vucjak offered neither permanent buildings nor infrastructure to support habitation—water, electricity, and sanitation were not provided. Migrants at the camp contended with many daily dangers including the presence of unexploded mines near the site that were buried during the Yugoslav Wars, as well as vast minefields in the nearby mountains separating Bosnia-Herzegovina and Croatia. Composed of feeble tents pitched in mud, Vucjak became a subject of intense international controversy as pictures were released with children wearing t-shirts and sandals in the snow.[27] Public outcry surrounding the conditions at Vucjak exploded across European media. By December of the same year, buses came to the camp to relocate refugees to a nearby army barracks.

Fig. 7.4 The Vucjak refugee camp near Bihac in northwest Bosnia-Herzegovina; *Photo* Dijana Handanovic

Romani Encampments

The first appearance of the Romani people in the Balkans dates to the fourteenth century. Official documents from 1574 mention Romani people working in coal mines. At the beginning of the nineteenth century, there were over 16,000 Romani people in Serbia, 10,000 in Bosnia and Herzegovina, and 14,000 in Macedonia.[28] Romani people started developing their own settlements named *mahala*. Composed of lean-tos and tents, these settlements were temporary as the Romani people were nomadic (Fig. 7.5). By 1990, Romani groups began following divergent settlement practices, and thus, three unique groups developed.[29]

The Crni Cigani (locally known as black gypsies) lived as nomads and formed temporary settlements throughout the former Yugoslavia.[30] The black gypsies spoke multiple languages but maintained their own Romani language. The Bijeli Cigani (locally known white gypsies) began abandoning nomadism as they developed permanent settlements and integrated further into society.[31] In many cases, the white gypsies abandoned their language and adopted the traditions and religions of the region. The Karavlasi believed and claimed Romanian heritage and, therefore, rejected being called Romani (gypsies).[32]

Even today, the Romani are a minority group in the former Yugoslavia. There are no reliable official statistics that accurately count the population living in the region. For example, the Bosnia-Herzegovina government statistics from 1991 show that there were 9000 Romani members, but Romani organizations from the same year note 80,000 members.[33] It is believed that the Romani numbers are more reliable. The

Fig. 7.5 Romani encampment in Belgrade. *Photo* Gregory Marinic

reasoning behind this discrepancy is that many Romani often categorize themselves as Yugoslav, Muslim, Orthodox, or other.[34] During the war between 1992 and 1995, Romani communities suffered just as greatly as the Bosniak community. They were persecuted, deported, and killed. Even today, many struggle to integrate and achieve acceptance in local communities. A very small number of Romani are employed in the formal economy, and the majority have not been formally educated.

In Bosnia-Herzegovina, the Varda settlement near Kakanj has roughly 600 residents; of these, 250 are children who do not attend a formal school.[35] Although the settlement is near the city center, it does not have a sewage connection nor equitable access to potable water. Varda has one community faucet for cooking and washing that serves 600 people with most residents walking more than 1 km to gain access to potable water. The entire settlement shares one restroom and housing is substandard. Many residents survive by reclaiming cast-off goods, selling scrap metal, busking music, and begging. Lack of access to health care and medication has resulted in widespread sickness and disease. In Sarajevo, a contrasting example is the Gorice encampment where Romani people have been settling for over 350 years.[36] Gorice comprises approximately 60 households that have been officially formalized and regularized. While the land was state-owned after the war in 1996, displaced families returned to rebuild their homes although the threat of eviction was imminent. In 2000, the Roma Association and residents coordinated with several international organizations to help initiate and eventually implement the regularization process.[37] Today, the community is increasingly educated, integrated, and capable of supporting themselves with work as their culture increasingly enriches the broader city.

Illegal Suburbs

Throughout the former Yugoslavia, illegal residential construction in peripheral urban zones was common after 1960. These areas are generally found in exurban areas surrounding large- and medium-sized cities. Illegal suburbs were typically built on agricultural lands in which the original owners subdivided and sold plots to people who built their own homes. Today, most residents of illegal suburbs are landowners but their homes were built without building permits. Illegal suburbs typically violate established land use policies, infrastructural standards, public space minimums, and right-of-way regulations. These settlements are so ubiquitous that they cannot be ignored. Illegal suburbs occupy large expanses of territory and often impact broader aspects of urban development. As such, these zones should be incorporated by their municipalities into policy, land use plans, and real estate market projections.[38]

Serbia has a long history of informal suburbanization that continually forms through illegal land development along the exurban edges of major cities.[39] In Belgrade, informal settlements occupy 22% of land.[40] Most of these settlements can be traced to illegal occupation, but over time, some tenure security has been achieved through formally recognized titles.[41] The illegal suburbs of Belgrade have declined further since the dissolution of Yugoslavia. These precarious zones have

witnessed shrinking populations and economic stagnation associated with intersectional issues of the effects of war, overseas out-migration, and low birth rates. Today, the settlements are facing dual challenges of illegality and obsolescence.

The illegal suburbs in Croatia formed during and after the break-up of Yugoslavia. In the 1990s, Zagreb was impacted by a considerable amount of illegal residential construction. On the one hand, informal settlements were created by refugees of the Yugoslav Wars because affordable housing was rare. On the other, many wealthier homeowners expanded their properties without permits. From 2000 through 2021, illegal construction intensified during the administration of Mayor Milan Bandić— the longest serving mayor in Zagreb history—whose mayoralty turned a blind eye to land development whereby investment-driven speculation and overbuilding led to uncontrolled sprawl.[42] Bandić aligned himself with the interests of private equity while simultaneously diminishing the oversight of residents and planners.[43] His administration reduced citizen participation in urban governance and marginalized those who disagreed with his controversial policies.

Unregulated construction practices expanded in Zagreb as illegal suburbs and socalled urban villa (urbane vile) apartment buildings (Fig. 7.6) metastasized across the metropolitan area.[44] On the east side of the city, many of these sprawling settlements lie within the flight path of Franjo Tuđman International Airport and, thus, exemplify one of the undesirable qualities of illegal suburbia. Although viewed unfavorably for their proximity to the airport, these illegal suburbs look much like formal urbanizations elsewhere in Greater Zagreb or Central Europe. At first glance, their housing stock is aesthetically pleasing, tidy, and well built. Their quiet streets are bordered by lush flower gardens that frame distant mountain views. The conundrum of such places is that they were built illegally, and therefore, do not fully benefit from the formal structures of governance. Furthermore, they occupy formerly forested lands that were bulldozed and replaced with hardscapes that degrade air and water quality. The bucolic visual qualities of these unsustainable places bely the underlying harm that they impose on the natural environment.

Conclusion

Given the significant regional diversity of informal settlements in the former Yugoslavia, it is important to avoid viewing informality as a universal condition across the territory. Rather, informal urbanization is a multidimensional phenomenon that intersects with various social, cultural, economic, geographic, and historical differences. Informality does not always represent substandard housing in the former Yugoslavia. It does, however, reveal insufficient regulation at the local level, as well as widespread deficiencies in post-socialist urban planning and permitting processes. Since 2010, governments throughout the region have established new laws to legalize informal settlements through building rules, fee reduction initiatives, and official registration of illegal constructs. This legalization has brought over 500,000 applications across Serbia and over 16,000 applications in Sarajevo.[45]

Fig. 7.6 Urban villas with unregulated setbacks; *Photo* D. Wolf

Nevertheless, the question of regulation remains more complex than the question of legalization because it depends on the persistence of residents, political will, and funding from governments, NGOs, and other sources.

Over the last five years, informal settlements in the former Yugoslavia have seen notable improvements to their infrastructure. National and municipal governments, however, continue to turn a blind eye to residents which forces the poor into even more isolated and precarious circumstances. The full scope of informal urbanism and its interfaces within the formal city should be considered synergistic and transnational. Doing so will afford a deeper understanding of the social, economic, and spatial morphology of informal settlements in Europe and the broader Global North, as well

as how such knowledge can promote social justice and a better built environment for the entire city.

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Chapter 8
Micro-Informalities: Spatial Appropriations in the COVID-19 Era

Deborah Schneiderman and Liliya Dzis

Abstract The onset of the global novel coronavirus COVID-19 pandemic resulted in the sequestering of human habitation to occur entirely within the interior environment. As locales across the globe reopen, inhabitation flips, causing exterior to become interior. Gatherings that might typically occur inside have moved to the outside. Those acts include, but are not limited to, a private conversation, a class gathering, a haircut, a class meeting, and dining. A notable result is an explosion of outdoor dining habitations (micro-informalities) taking to the streets and occupying the space of a parked car. The design of exterior space can be likened to the condition of the interior when that exterior space takes on qualities of privacy, inhabitation, and enclosure (formal, psychological, programmatic, or atmospheric). The micro-informalities, while expeditiously designed and fabricated, are permitted through a set of criteria developed by the City of New York. They are aligned with practices of the "tactical urbanism" movement which facilitates the appropriation of exterior spaces, such as small parking spaces. This chapter analyzes and investigates the construction and inhabitation of the appropriated parking spaces as micro-informalities as they align with the theoretical area of inquiry regarding exterior spaces with interior conditions or exterior/interiors.

Keywords Public interior · Interior design · Architecture · Interior architecture · Interior theory

In the midst of the global coronavirus COVID-19 pandemic, our interiority has become convoluted, as there has been a near elimination of typical interiors where gathering is permitted, and hence, the layers of interiority have shifted. Lois Weinthal

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Fig. 8.1 Second layer (lipstick) + third layer (mask). *Diagram* Liliya Dzis

regards interiority as a system of layers from the body outward,[1] referring to the textile layer of clothing as a second skin and in so doing references the work of Annie Albers, who regards this textile layer as a third skin.[2] Weinthal attributes this transition from second-to-third skin to techniques of textile construction.[3] This analysis, however, can also be applied to the transition from the pampering of the body (or make-up) as the second skin beneath the clothing or textile layer, including a mask, which is then a third skin (Fig. 8.1). Accordingly, the mask is regarded as a transitional interior for the porting of the body between constructed interiors and protects the innermost layer.

During the COVID-19 pandemic, interior life has become mostly confined to our primary interior, the home, where such foundational layers might be abandoned as there is no public interaction.

More than half of the world's countries and some individual cities now mandate the wearing of face masks in public. The first countries to set national mandates on wearing masks were Vietnam and the Czech Republic. While the United States Centers for Disease Control and Prevention (CDC) advised Americans to wear them from April 2020, it was still not mandated by the federal government at the time of this writing.[4]

This chapter is written from the acute perspective of one area in Brooklyn, predominantly Smith Street and Union Street in the Carroll Gardens neighborhood. It is written from the perspective of a lived inhabitation of city life limited by the pandemic and a privilege/choice not to utilize transportation unless critically necessary. Therefore, the visual research is derived from a series of walks over three seasons including summer 2020, autumn 2020, and winter 2020/2021. As noted by de Certeau in *The Practice of Everyday Life*, the view from the top of the World Trade Center (the original World Trade Center and tallest building in New York City at the time of the writing) provides a detached context for understanding the city. The pedestrian view when walking the city can be understood as critical inhabitation where pedestrians not only understand its meaning but also take part in creating it. It is from this perspective that the authors intentionally choose not to write about micro-informalities in cities across the globe, only experienced from the furthest distance of the outside of a computer screen, but rather analyze only those experienced.[5]

In New York City, outside of the home, one can only remove one's mask within the boundary of the exterior/interior (an exterior environment with an interior condition) of restaurants, referred to here as "micro-informalities." These assemblies are termed micro-informalities for their constricted dimension (typically the size of one parking space) and for their typically DIY fabrication (though they follow a set of criteria, it is not exhaustive). The interior condition provided by these micro-informalities provides an opportunity to brandish this second skin layer and, in turn, enhances the interiorness of the space as one is only permitted to expose this layer when in the most intimate of interiorities—one's homes and now, dining micro-informalities. Thus, the exposure of the pampered layer, revealed by the removal of the masks, emerges as critical components of the interiority of the micro-informalities.

The Exterior/Interior

The query into the interior condition in an exterior environment has been the focus of much attention in early twenty-first-century interior design scholarship. In Richard Sennet's seminal lecture, "Interior and Interiority," he proposes that the interior is where people feel free to show themselves as they really are. According to Sennet, the interior is not merely architectural but also expressed in people's clothing. People dress differently at home than in public.[6] The NYC mask requirement likens the
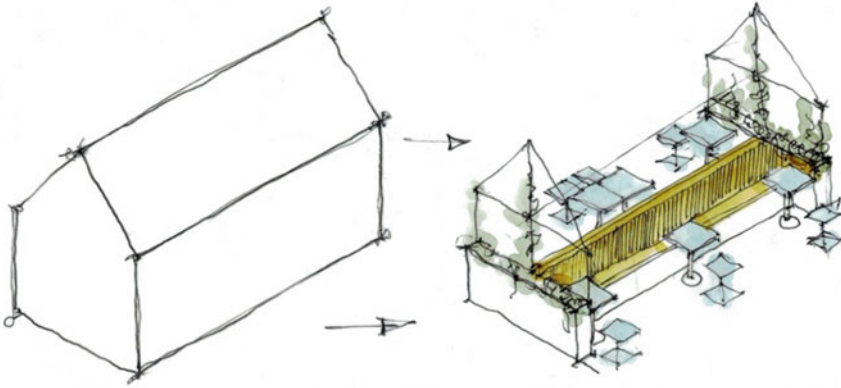
Fig. 8.2 Exterior/Interior. *Diagram* Liliya Dzis

micro-informality dining environment to that of one's home (Fig. 8.2), as these are the only places of assembly outside of the home when the face can be unmasked.

The mask, perhaps during the COVID-19 pandemic, the most critical article of the third skin, acts as a suitcase for personal interiority. The mask allows one to transport interiority, and hence, it becomes an intimate action to remove the mask; this intimacy then becomes part of the experience of these micro-informalities, ascribing them with further attributes of interiority. The mask, donned before leaving one's home and container of that second layer, carries these most intimate spaces until we remove the mask again when entering the micro-informalities; these micro-informalities offer an intimate, interior experience, even if outside. Georg Simmel proposed that an exterior and interiority existed in the street as exposure to others which produced feelings of subjectivity and individuality, which he argues is interiority.[7] Sennett references Simmel and contends a contrary account, reiterating the subjective feeling in the city due to exposure to others.[8] Although in an era of mandated masking, the exposure of self in public is limited and only truly possible in the dining micro-informalities. While the mask can be regarded as a third skin or personal interior environment, it is simultaneously a blockade against interiority in terms of exposure to others.

Interiority can exist in spaces that are not inside at all. "The design of exterior space can be likened to the condition of the interior when that exterior space takes on qualities of privacy, inhabitation, and enclosure (physical or alluded to). Exterior spaces with interior conditions are evidenced on the very intimate scale of a courtyard or backyard or in the very public realm of a piazza, square, or even city street."[9] According to Merwood-Salisbury and Coxhead, the contemporary global city is as much an interior condition as an exterior one. The courtyard of the sixteenth-century Uffizi palace in Florence is an early, fitting example of an exterior space with an interior condition. Enclosed by walls on all sides, the courtyard is inhabited as a defined public interior space.[10] Walled pocket parks, such as Paley Park, 1967, in New York City, can be considered an archetypal example of exterior/interior, surrounded on three sides by buildings, with movable seating that encourages passersby to pause

for a moment and engage with the environment. The tactical urbanism movement described by Merwood-Salisbury and Coxhead facilitates the appropriation of exterior spaces, from areas as expansive as Times Square, New York City, to those as small as parking spaces such as parklets (parking space parks).[11] The parklets, much like the Paris arcades, co-exist as interior and exterior at once.[12] The COVID-19 crisis has generated not only challenges in how we can interact in public, but also new opportunities to test our ideas as designers in extreme conditions and refine them to make them even stronger for more typical scenarios.[13]

For this research, de Certeauian interactions in space are interpreted through an understanding of public interiority as defined by Liz Teston. Teston further extends these ideas around space as defined through social interaction with her concept of public interiority. According to Teston "...while we frequently experience interiority inside structures, public interiority is also a perceived condition found in the public sphere, without structure. It is possible to have a place that feels like an interior, without the constraints of architectural form. Or an interior-feeling place that is primarily delineated by atmospheres, and merely supported by architectural form. These public interiorities, or interior-feeling places, are shaped by many conditions such as psychological conditions, atmospheres, form, program, or a mixture of all."[14] The interiority of the New York City micro-informalities that emerged during the COVID-19 pandemic can be attributed to a mixture of Teston's defined conditions of public interiority: psychological, atmospheres, form, and program.[15]

New York Restaurant Micro-Informalities: Context and Criteria

Managing the COVID-19 pandemic in a megalopolis such as New York City necessitated and enabled an expansion of interior space to the exterior. Regulations in New York City for the majority of the COVID-19 pandemic period have caused full closure of restaurant interiors, making this typically interior act only possible on the exterior. To accommodate this, the mayor of New York City, Bill de Blasio, proposed an outdoor dining program. The newly created Open Restaurant Program initiated a multi-phase program to expand outdoor seating options for food establishments to promote open space, enhance social (Fig. 8.3) distancing, and help save the restaurant industry. Through this program, outdoor seating has transformed New York City's streetscape. Due to the current evolving pandemic situation for safe seating and parking conditions, the city developed a set of criteria. According to the official NYC Web site, the program continues to evolve to address changing conditions, such as slippery roads, snow removal operations, and snow piles pushing against barricades.[16]

The Open Restaurant criteria include sidewalk limitations, as well as social distance (see *coda: social distancing* at the end of this section) requirements between seating, as well as the seating area, sidewalk, and adjacent properties. Recommended
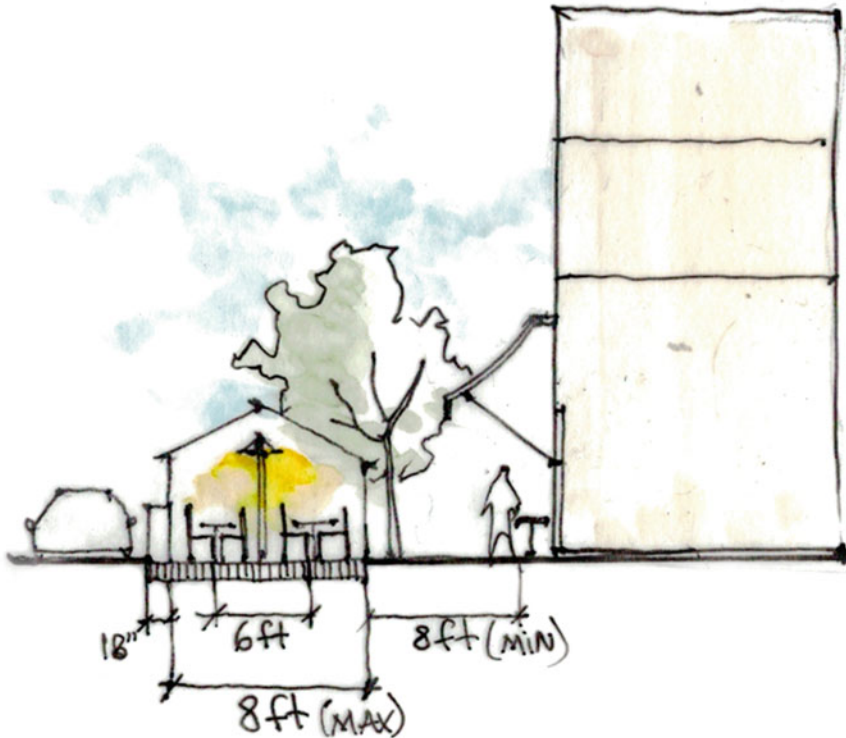
Fig. 8.3 Micro-informality social distancing. *Diagram* Liliya Dzis

criteria intend to guide the building of the assemblies. For instance, restaurant owners are allowed to leave barriers in place within zones ordinarily designated for metered parking, alternate side parking, or "no parking anytime." Tables and chairs must be easily moveable so they can be quickly removed and replaced according to hours of operation. Roadway seating may not be placed in a bus stop, bike lane, taxi stand, car share parking space, painted curb extension, expanded sidewalk, or vehicular moving lane. Moreover, street seating may be set up in a bus lane as long as all barriers, seating, and ramps are removed during the hours "no standing" is in effect.[17]

These criteria determine the location and dimensions of outdoor seating on a roadside. It must be located more than 15 feets from the nearest fire hydrant, more than 8 feets from the nearest crosswalk to allow for safe vehicle turns, and 8 feets or less from the curb to avoid crowding. Roadway seating barriers must be continuous on three sides, continuous with no gaps large enough for a child to pass through or underneath, at least 18 inches thick, and between 30 and 36 inches high. It is recommended to fill barriers with sand or soil to ensure strong, solid barriers. Seating barriers must have high-intensity retro-reflective tape or reflectors. For the safety of passing drivers, restaurants should not use any lighting that is bright enough to blind passing drivers. Tents must be under 400 square feet in area. Umbrellas must be
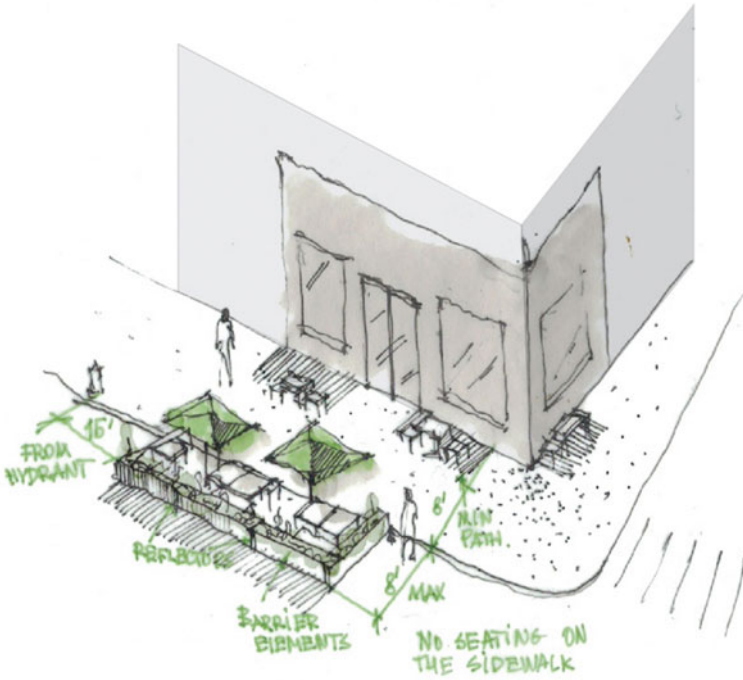
Fig. 8.4 Open restaurants criteria. *Diagram* Liliya Dzis

weighted down, but not affixed or bolted to the roadway or sidewalk. The roadway seating must have a ramp, made of non-permanent materials, from the curb to the seating area, if not already level (Fig. 8.4).[18]

Special winter conditions may initiate the temporary removal of some barriers from the roadway. Regarding clear path purposes, parking meters, traffic signs, and tree pits are exempt. All other above-grade structures are considered obstructions. The city allows restaurants to use three options for heating elements in outdoor dining spaces: electric radiant heaters allowed in both sidewalk and roadway seating, natural gas radiant heaters, and portable heaters fueled by propane on the sidewalk only. As the average winter snowfall in New York City is about 25 inches, there are further criteria during an active snow alert. All electrical heaters in roadway spaces must be removed. If possible, restaurants should remove any overhead coverings. Also, roadway setups must be removed to have as small a footprint as possible along the curb.[19]

Coda: Social Distancing

Throughout the world and in the dining micro-informalities, both interiors and exteriors are brandished with signs calling for social distancing. Notably, Ed Hall, in his seminal text *The Hidden Dimension,* coins "Proxemics" as "the interrelated observations and theories of humans" use of space as a specialized elaboration of culture.[20] He defines a set of distances as intimate, personal, social, and public. Proxemics research was not cross-cultural; rather, Hall's definitions were based on a study of middle-class, white Americans in the Northeastern United States. With the COVID-19 pandemic, Hall's term, social distance, has become an international mandate for the safe occupation of space, both interior and exterior. While Desmond Morris, a zoologist, defines a more culturally accommodating definition of these proximities, it is Hall's s*ocial distance* that has become internationally accepted as safe and can be understood to have created a spatial connection between cultures in this world-altering pandemic.[21] Arguably, it was predominantly students of sociology and interior design who were taught this information in their coursework, and some interior designers have implemented this understanding as culturally appropriate into their work. With the new necessity for social distancing in all inhabited environments, interior designers have an opportunity to utilize this knowledge toward innovation in the production of space.

Micro-informalities as Spatial Appropriations

An analysis of the parking space micro-informalities according to the conditions outlined by Teston and listed above facilitates an apprehension of their ability (or failure) to produce exterior/interiority.

Psychological

If the psychological, or immaterial, interior "is a state of mind and relies on fleeting circumstances," then the psychological interiority of a micro-informality can exist in the social construction of space and in the act of unmasking.[22] As theorized by Henri Lefebvre, space (and hence the interior) can be socially produced, where "social space is constituted neither by a collection of things or an aggregate of (sensory) data, nor by a void packed like a parcel with various contents, and that it is irreducible to a "form" imposed upon phenomena, upon things, upon physical materiality."[23] Psychological interiority is also generated through the ability to surround oneself with strangers in a common condition, satisfying a need for social empathy. Georg Simmel described *geselligkeit*, or sociable empathy, as derived from being near other people without close-knit associations.[24] While outdoor dining previously existed, it was not in the

Fig. 8.5 Dining informality with heaters. *Diagram* Deborah Schneiderman

condition of being the only place where one could unmask in public, as to be fully seen. This micro-informality provides the only opportunity to publicly show the unmasked lower face. The unmasking makes this micro-informality the second most intimate space in the COVID-19 era and hence an exterior/interior condition.

Atmospheric

Atmospheric interiority provides the haptic condition of heat and air-conditioning that acclimatizes and interiorizes the micro-informalities. Cool air that is generated by the expanded threshold of the restaurant's open doors can send cool air to the micro-informalities in the summer months. Heaters (as previously outlined in the New York City regulations) provided by the restaurants similarly generate an interiorized zone separation for the micro-informality from the colder exterior beyond this permeable boundary (Fig. 8.5).

Form

As outlined above, the micro-informalities are defined differently than the typical outdoor dining areas of restaurants. The zoning ordinance that allows for micro-informalities within a parking space generated a new interiority. The predecessor,

Fig. 8.6 Micro-informality tethered to building. *Diagram* Deborah Schneiderman

parklets, arguably forefronted this notion of interiority within the defined parking space. The restaurant's occupation of such a space has privatized this once public zone enhancing its interiority, while unfortunately potentially altering our expectations of the constancy or reliability of public space. The outdoor eating zone of the restaurant often abuts the wall of traffic on its outer long edge, and the cars parked on either side and the sidewalk. Although servers and customers walk back and forth across this space, along with the general public, it is more fluid. With many of the restaurants open only at night, the addition of lighting generates zones of interiority defined by the porous boundary edge of the lit place from the unlit space beyond. Yet, the electricity required to operate the outdoor lights visually and physically connects to their interior/interior counterparts as they are tethered to them by electrical cord (Fig. 8.6). Some have constructed inhabitations such as ceiling elements, flooring, and planters that further connect the interior/interior to the exterior/interior.

Program

This programmatic interiority afforded by the use of the space as a dining environment is evident in the occupation of these spaces for restaurant activity. Although dining outdoors occurred before the pandemic, it was typically an addition to indoor dining used only in seasonable weather. Without occupation, the micro-informalities often read only as makeshift constructions and only interiorize when employed for their intended programmatic use (Fig. 8.7).
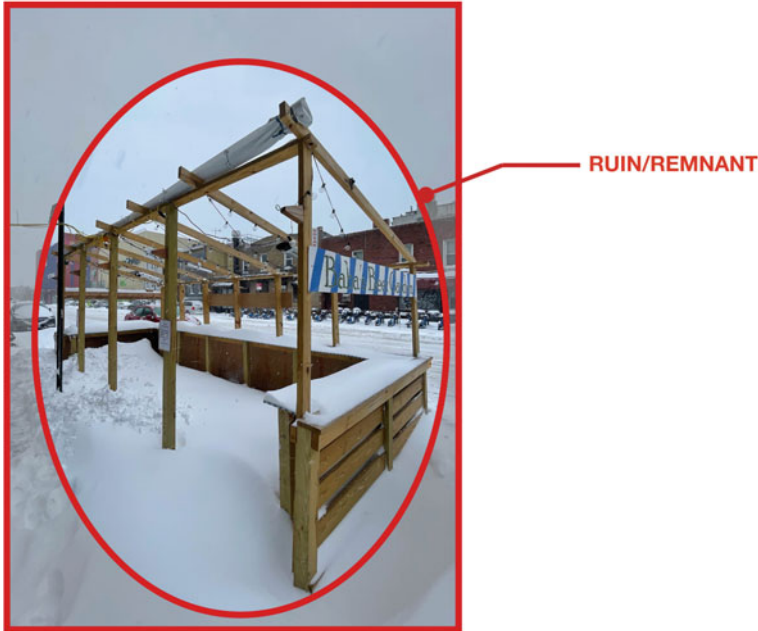
Fig. 8.7 Micro-informality Ruin/Remnant. *Authors* Deborah Schneiderman and Liliya Dzis

Unfortunately, a copious number of the micro-informalities have been constructed in an ad hoc manner (and without external financial support) to expedite restaurant operations. Hence, when uninhabited without a program or socially produced space, the micro-informalities do not appear as interior or even architecture at all, rather often, they materialize visually as ruins or remnants. While some outdoor dining areas have been constructed with individual enclosures such as yurts and green houses, and as such might be more visually polished, these environments arguably operate as small buildings rather than interior and exteriors. They fail to adequately fulfill the psychological, programmatic, or socially constructed interiority.

Case Study: Rockwell Group|The DineOut Tool Kit

An open-access downloadable set of drawings, DineOut Tool Kit, developed by Rockwell Group for their initiative DineOut NYC begins to address many of the concerns raised in this chapter. The DineOut Tool Kit is a design solution for the fabrication of dining micro-informalities that meet New York City's criteria for dining environments. Additionally, Rockwell Group has initiated a fundraising effort to help support the fabrication of these environments. The proposal offers an adaptable and

modular system that allows the dining environments to expand into and engage the street, while also maintaining social distance.[25]

The DineOut NYC Tool Kit consists of a dining booth, sanitation station, wooden decking panels to cover pavements, and plant-covered street fencing. These elements are accompanied by accessory items including lighting, umbrellas, fans, heaters, and planter benches.[26] The planter benches have a telescoping capacity to enable them to expand into and engage with the street during hours when the street may be closed to vehicular traffic (Fig. 8.8).

The studio fabricated the first prototype for Melba's Restaurant in Harlem. It includes nine covered booths divided by fencing on the street with additional seats placed on the pavement to maintain a social distance. This proposal also demonstrates a series of floor plans and detailed methods to create a small, 30-seat outdoor restaurant.[27] The Rockwell Group furthered this proposal for a full block fabrication for Mott Street (and streets in other neighborhoods across the New York City boroughs), which is closed to traffic on weekends, and implemented the telescoping planters which engage the environment beyond the micro-informality and transform
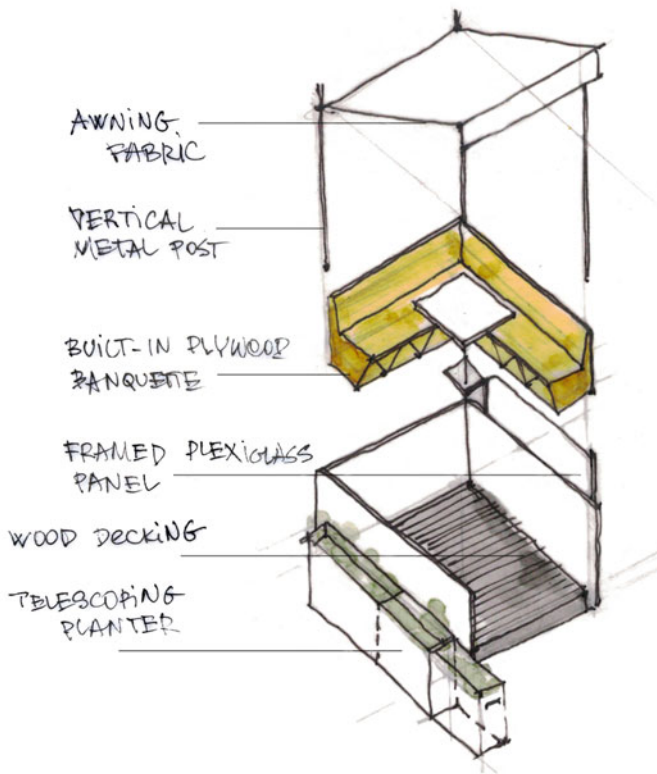
Fig. 8.8 Rockwell Group dineout took kit. *Diagram* Liliya Dzis

the entire block into an exterior/interior. Additionally, designers collaborated with local artists to incorporate murals into both the exterior and interior of the dining environment, activating a more robust visual engagement with the street culture for both pedestrians and vehicles.

Postscript

One cannot understand the micro-informalities from the outside, but rather, they can only truly be understood as experienced through inhibition, maskless. The interiority of appropriated parking spaces in public streets built as dining micro-informalities is made possible by the psychological, atmospheric, formal, and programmatic conditions that transform exterior spaces into interior conditions. During the COVID-19 pandemic era, the exposure of the innermost layer by the sanctioned removal of the third skin, or mask that is necessary for every other public space, enhances this condition of interiority.

The traditional culture of public interiority may have been lost, while the experience of public interiority of these micro-informalities, as described along NYC streets, is assuredly and unfortunately one of privilege. This newfound interiority can only be experienced by those who can afford the cost of a meal, but also could be considered intrusive—and on display—to those just walking by. Certainly, Rockwell Group has initiated an open-access design solution that addresses several of the issues with the micro-informality dining environments. It considers the fabrication of the micro-informalities, engagement with the environment beyond, and financial support for the restaurants. A proposal that would be more inclusive—and one that I have pursued in my design studio course—would share the streets in a more equitable way. The micro-informalities afford restaurants the ability to continue their necessary operations to maintain business (to keep them afloat during a time of mandated interior closure) and to satisfy government loan requirements to keep staff on payroll. Where many of the restaurants have been "allowed" or financially forced to build these inhabitations, a government intervention could create an opportunity for shared space and responsibility.

Restaurant construction, occupation, and operation of the micro-informalities are temporal: Some remain unoccupied in the morning; some are empty until evening; and some are closed for several full days each week. Formally mapping this temporal occupation could provide insightful information to guide additional programmatic use of the environments. The micro-informalities could accommodate classrooms (so children can learn in safer exterior/interior environments in daytime hours). They could be shared with other businesses, including but not limited to hair salons, clothing shops, and bookstores. They could even accommodate more civic programs including food pantry distribution centers and libraries (for instance, the Carroll Gardens Library remained closed throughout the critical months of the pandemic). When not in use by an organized venture, they could be a place that anyone can

occupy as public space. Such a public/private joint venture would reduce the restaurant owners' financial responsibility to interiorize and acclimatize these environments, making them more robustly inhabitable exterior/interiors. Hence, the micro-informalities could provide the possibility for removal of the third skin (the mask) to everyone—allowing them to reveal themselves and their second skin.

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Part II
Latin America

Chapter 9
Red and Green: Toward a New Framework of Civilized Coexistence

Jorge Mario Jáuregui

Abstract Traditionally, the color red has been associated with social movements that defend the creation of jobs and community relations associated with belonging to a place, while the color green has symbolized (green) movements and parties that seek to save the environment. What we need today is to merge red (social justice) with green (care for the environment) by promoting responsible public policies and citizen mobilization, seeking to make cities fairer, with quality architecture and public spaces. It is necessary to unite economic justice, the right to a desirable city to be lived by all, and a requalified environment. This requires big thinking and connecting the dots, synthesizing the social with the ecological. Since the pandemic, the need for a change in our civilizational "model" has become very clear. Where can we look for new parameters? This can be achieved by carrying out a critical analysis of everything that has already been done, by thinking and redefining the positive, discarding the negative, and finding new ways out of this crisis. It is necessary to clearly formulate new goals and build the (political) conditions to achieve them. The architect's "social function" consists precisely in giving coherence to the set of diffuse social demands, giving them a visibility that allows action. The building of sustainable cities implies seeking the alliance of the environmental agenda with that of social justice. The path must inevitably include both red and green.

Keywords Favela · Social movements · Green movements · Justice · Inequality

Traditionally, the color red has been associated with social movements that defend the creation of sources of work and social relationships based on belonging to the place. Green, on the other hand, symbolizes initiatives, parties, and policies that seek to protect the environment. Today, we should merge red (social justice) and green (ecological) initiatives by promoting responsible public policies and mobilizing citizens, to create more just cities with quality public spaces and facilities, and thus, guaranteeing right-to-the-city for everyone! We should unite the spatial justice and environmental agendas.

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Urbanism and the economy are the most pressing issues of our time. They were crucial issues before the pandemic, and they will be even more so in the future. The COVID-19 crisis has revealed the inefficiency of existing mechanisms for dealing with the demands of divided cities and societies. Through the pandemic, we have learned the significance of globalization—the imminent possibility of rapidly spreading hazards across the planet.

In addition to these questions, the full extent of neoliberal's devastation was revealed—the plundering of non-renewable resources, air, land, and water pollution, as well as the eco-predatory behaviors induced by the techno-scientific capitalist mode of production. These issues follow in the footsteps of poor planning, short-term "market" visions, the commodification of health, and the exposure to permanent crises. In short, the pandemic has exposed the fragility of the system and its future. We must urgently articulate public policies capable of connecting urbanism, ecology, economy, environment, and society. This recalibration is the equation we must solve.

Socio-spatial Conglomerates

A megalopolis that imposes challenging living conditions on large swaths of the population requires new approaches to our physical, social, and ecological systems. These methods should be developed in an articulate manner, prioritizing the relationships between the formal and the informal aspects of the urban fabric (Fig. 9.1).
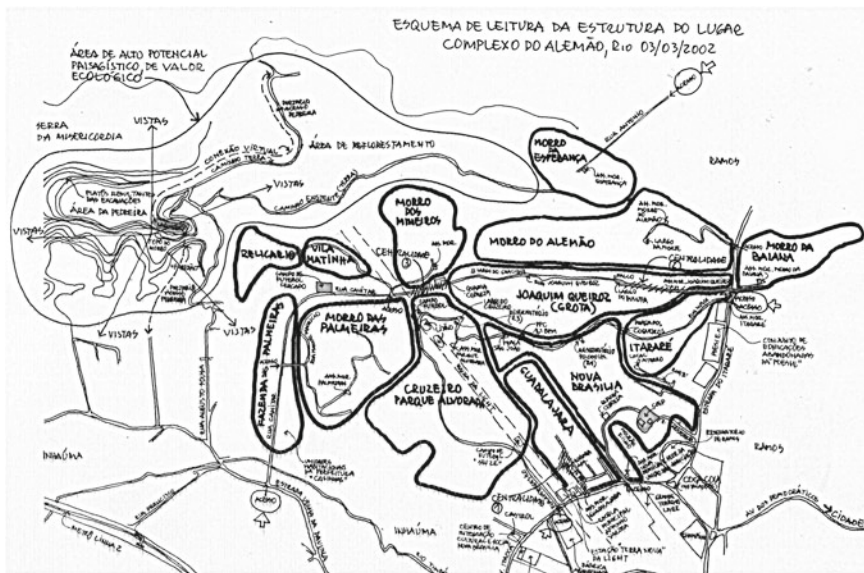
Fig. 9.1 Sketch of the Complexo do Alemão. *Drawing* Jorge Mario Jáuregui

The complexity of these processes asks for strategies that intersect across disciplines such as urbanism, sociology, philosophy, psychoanalysis, engineering, geography, and ecology. Therefore, this advocacy assumes specific responsibilities, namely to constitute a spatialized and territorialized interpretation of the diverse and diffuse needs of society (Fig. 9.2).

In addition to urbanism, the city is the object of study and action concerning the social sciences; it is the place where all the variables intersect with localized expressions of imagination. The relationship between city, architecture, urbanity, environment, public space, and society is at the heart of what should be articulated in each scale of intervention (small, medium, large, and territorial). The physical and socio-economic transformations provoked by both globalization and the pandemic contain the most evident symptoms: the continual extension of peripheries, disconnection between different parts of the "urban fabric," exacerbation of social differences, disenfranchisement of communities, and various infrastructural inequities.

Contemporary socio-spatial conglomerates ask for efficient responses to resolve primary urgencies, as well as an orientation toward a democratic concept of the city that can make it a friendly, habitable, and sustainable place for all. Due to its complexity, the issue of the self-built city must be approached simultaneously from multiple perspectives as a multidisciplinary and multiscalar question. In every country, attempts to address this issue must consider policies for job development in a structured way, umbilically tied to policies that support "city building" rather than simply building housing. Likewise, proposals should offer various alternatives for accessing urban land, infrastructure, and affordable housing.

Fig. 9.2 Aerial view of housing nucleus in the favela Complexo do Alemão. *Photo* Jorge Mario Jáuregui

The problem always transcends housing. Building a city implies the need for housing, public spaces, and services, as well as the conditions for the efficient mobility of people. The program must always consider the configuration of sensitive aggregates (Deleuze) where heterogeneity and diversity (of people, of economic, and cultural conditions) advocate for equality and inclusivity. Regarding social housing, it must meet new demands imposed by the pandemic. In addition, we need to accept that self-construction will persist and need to be incrementally assisted and supported. The state can become an active participant in this process through various means. What is at stake in this minefield? Social conflicts emerge in relation to equitable living standards and strengthening bonds. Such advocacy engages housing policies that promote an economy of the common good—simultaneously developed from below (together with the people) and from above (decision-making bodies).

The Problem with Interpretation

It is necessary to raise questions related to the subject (or a community), of a place (urban or not), of a program (whether a house, a hospital, a school, a museum, or a community organization), and how our disciplinary fields address those questions. The interests of those working with the favela residents are associated with *listening,* concerning the interpretation of the demand, articulating the individual with the society, the intimate with the common in an urban, architectural, and environmental project. Furthermore, when it comes to listening, the impact of psychoanalysis in various fields of knowledge should not be ignored (Fig. 9.3).

Following years of experience listening to demands, psychoanalysis sheds light on the importance of desire in the Freudian sense. As defined by Freud, desire is enigmatic and differs from need, which can be satisfied with a suitable object. As psychoanalysis shows, desire is masked by symptoms, dreams, and fantasies. These are signs of perception by which an experience of pleasure or displeasure leaves traces in the psychic apparatus. When the object is searched, the object refers to something lost from the beginning, but that leaves an inscription, a trace. Desire can bring us closer to or further away from the demand. Psychoanalysis tells us that listening is not about responding but of contributing something else. In the established bond,

Fig. 9.3 Community meeting—listening to the demands. *Photos* Jorge Mario Jáuregui

there is something else at stake that is not simply the question of needs or programs as in the case of architecture and urbanism. In both architecture and urban planning, the question is how each is situated in relation to desires intervening in the design process, of learning what we do not know. This is a feature of the architectural and urban creative act, the place where the architect is affected by their desire.

Understanding order in the apparent disorder implies a work of *contingent articulations*, seeking the coexistence of opposites, not necessarily meaning they complement each other. Many situations are developed beyond the individual, recognizing the existence of others with equal rights, realizing that we do not exist alone, that we always "do with," which implies re-knotting one's existence with the existence of others. However, physical presence by itself does not establish community. Common issues should be supported through debate, discussion, and established relationships. The bases on which the ethos is mounted (which means habit, custom, the place where one is at home) demonstrate the tension between the ethical and the political. In this sense, aesthetics have strong ethical-political implications. Those who speak of creation speak of the responsibility of the creative instance concerning the created thing, in the inflection of the state of things, and in the bifurcation of pre-established schemes. Therefore, a fertile field for "listening" exists between what is said, the acts and failures, and what is not said (but that operates) within the fertile field of "listening."

Mottled

Considering public policies and urbanization in a common framework implies identifying the initiatives capable of promoting the general interest and well-being of the community. It assumes encompassing issues that concern the individual and the collective, considering the circumstances when the individual interest is compatible with the collective good. In the current context marked by socio-economic crises, an increase in unemployment and inequalities, the incompetence of politicians, geopolitical instability, and the escalation of right-wing populism throughout the world, we must continue reflecting on issues that impact both the public and private spheres. We must seek *rationality* by solving the problems of a market economy, rather than a market society.

The challenge is how to contribute as architects and urbanists by creating jobs and including women in an anti-charity viewpoint, contributing to generating *communitarian richness*. We propose: (1) creating intermediary spaces, acting between the legal and the illegal; (2) appropriating methods and practices of the global market; (3) affirming circuits that already have a repertoire of social knowledge and creating artifacts that challenge this scenario of violence and economic inequalities; (4) using variable and flexible forms that absorb and manage know-how in permanent tension between the inclusion of workers and reinventions of "the popular;" (5) mixing entrepreneurial and self-managed forms of work with popular finance systems combining the self-organized, with state participation and private capital;

(6) favoring a network of interrelationships and productive cooperation; (7) enabling access to investment minimizing the need for formal requirements and reducing banking-financial intermediation; and (8) promoting great diversity of activities for the generation of work and income with a multiplicity of specific purposes, capable of turning them into a productive force.

Understanding the common good as a space of opportunities supposes many ambivalences, tensions, and conflicts. It is a process in continual transformation, characterized by dynamic growth due to overlaps (formal-informal, legal-illegal, work and parties, chaotic flows such as merchandise and people, precariousness and insecurity, etc.) that can be strengthened through plans, where traditional economic methods coexist with cutting-edge technologies. What is happening today in many places on the planet, amidst a functionally, visually, and environmentally polluted environment, creates a scenario where urban design, architecture, and landscape projects can significantly improve living conditions. They should be articulated with comprehensive public policies capable of interconnecting many variables that take into account what is already in place. In this sense, the motley is a firm starting point that needs structure; it first needs to be interpreted. And always, each case will require a specific scale of intervention. The problem, therefore, is the effective mobilization of social intelligence already in action, but it must be necessary to channel. We need to articulate the individual with the collective under the framework of an economy of the common good, simultaneously working with the consolidated and the dispersed.

Inequalities

Across the Americas, contemporary societies retain the imprint of slavery, racism, violence, and poverty as constitutive traits. From its origin, each country, to a greater or lesser degree, exhibits those marks and continually experiences riots, demonstrations, and protests of all kinds. These symptoms never resolve the underlying conflicts and inequities. Throughout time, different interpretations have sought to understand and propose new ways to face this inhumane legacy.

We could say that, from the colonial period until nowadays, the characteristics of this continent are a clash between "development" and inclusion, democracy and the search for equal rights, indigenous peoples, and those who came after. In emerging cities, now turning into megacities, the framework of exclusion consisted of identifying the different parts and urban sectors, creating "noble" and marginalized areas. The pandemic has exposed these inequalities. We must aim for democratic principles of enjoyment of urbanity for all, understood as a way of coexistence and difference in heterogeneous societies, where the most vulnerable have the right to protection and justice.

Social justice implies thinking in a collective project, where the state can act as arbitrator, as a means toward promoting equality and resolving conflicts. The objective is to achieve more equitable conditions of life. To this end, we must work with a vision of social urbanism that integrates the different scales and dimensions of

Fig. 9.4 Aerial view of urbanization of favela Fernão Cardim. *Photo* Jorge Mario Jáuregui

problems (Fig. 9.4). Today, it is essential to articulate social urbanism with policies that create jobs, protect diversity, and reconfigure the environment, seeking a green and socially responsible economic regeneration.

Strategies and Tactics

We should reconcile urban planning (the strategic) with the reorganization of post-pandemic urban life (the tactical). The general evolution of the city should respond to the greatest urgencies while offering a coherent framework for actions. In this sense, it is about thinking globally (conception) and acting locally (tactic). It is constantly correcting and channeling social interactions, anticipating conflicts posed by the marketplace against the isolated activities of inhabitants. "Planning the city implies simultaneously thinking about the plurality of reality itself and giving effect to that thought of the plural; it is knowing and being able to articulate".[1]

The symbiosis between the city and the concept is about the permanent intersection of theory and design practices. Theory derives from continuous reflection and design practice based on a constant reinterpretation of reality. Theory and practice feeding each other imply re-signification of the existing in parallel with the rectification of trajectories.

Slums

The favela (or slum) is not an invaded territory, but a place composed of a delicate balance between the physical and the social, which engages well-defined and consistent public policies. Those policies should be able to solve environmental, infrastructure, housing, mobility, health, land tenure, and public space concerns. To achieve this, it is necessary to have a public authority articulated in three levels (federal, provincial, and municipal), coordinated with other public agencies (Fig. 9.5). Public administration must engage and mediate the interests of the private initiative and the grassroots organizations active in each place. While the favela is a place of physical deprivation, it also boasts an enormous wealth of social interaction. Depending on the specific scale and context, it can be interpreted as a productive territory that demands appropriate questioning.

The favelas provoke a challenge, as well as an opportunity for innovation, creativity, and production (Fig. 9.6). Their collective intelligence drives their progress. In times of pandemic, public power should reach each resident's house with a range of well-structured public policies—urban, sanitary, and housing—as well as consistent job and income-generation opportunities.

Fig. 9.5 Community square. Housing in favela Rocinha. *Photo* Jorge Mario Jáuregui

Fig. 9.6 Housing nucleus in the Macacos. *Photo* Jorge Mario Jáuregui

Collective *momentum*

It is clear that we must connect the consensus built between ecological awareness and climate emergency with the protection of life, aiming toward a more egalitarian civilization. Global production and consumption chains were affected and interrupted. How they will be recovered remains a serious challenge. There is a latent challenge concerning how, and in what direction, we can reorient both production and consumption, introducing profound modifications and changing habits. We should move beyond individualism to include the other, where the individual is open to the "other," and thus, rebuilding the notion of individuality.

   With technological progress, there is a demand for fewer jobs. And at the same time, we live in a strange "calm" with the uncontrolled spread of viruses, where inertia coexists with the unpredictable. The logic of infinite accumulation entered into a deep crisis. Economies framed under the dogma of neoliberalism, that is, "produce-consume-always have more," with the imperative that everything must be "profitable," must be reassessed and reoriented. Planning, architecture, housing, and landscapes articulate the city (Fig. 9.7). These aspects address habitability, health, work, recreation, and mobility while solving shocks to the system. There is already enough experience and technical means to do so. We must make smart decisions.

Fig. 9.7 Housing nucleus in the Complexo de Manguinhos. *Photo* Jorge Mario Jáuregui

Malaise of the Present Moment of Civilization

Sigmund Freud defines culture as the sum of operations and norms that distance our life from that of our ancestors. They serve two purposes: protecting the human being against nature and regulating reciprocal ties between men. In addition, he raises a question: If cultural development is achieved, to what extent can we dominate the disturbance of coexistence that derives from the human drive toward aggression and self-annihilation? Our age should focus precisely on this connection, wrote Freud in 1930. Today, human beings have advanced their dominion over the forces of nature to the point of potentially exterminating humankind. Their realization of this, he adds, explains much of contemporary restlessness, unhappiness, and anguish. Freud concludes by expressing doubts about who will finally triumph in the struggle between life and death. We should consider Freud's thinking concerning our moment and how those malaises can be expressed in various fields:

- Political malaise (manipulation of public opinion with fake news)
- Economic malaise (increase in inequalities)
- Social malaise (exacerbation of differences; intolerance; racism; xenophobia; rejection of immigrants and refugees)
- Environmental malaise (pollution, fires, global warming, depletion of resource sources)
- Urban malaise (cities divided between formal and "informal" sectors, with large areas without urban, architectural, landscaping, and environmental quality)

- Malaise in civilization (appropriation of the notion of progress by science, but scientific knowledge is no longer considered as a factor of civilization)
- Malaise in subjectivity (pact of progress with barbarism, evidenced today in several countries).

Urbanism, Housing, and Society

Politics, the global economy, and the fight against the pandemic are increasingly interrelated. Opinion-makers alarm the public (mostly made up of "ordinary people") with negative numbers on the economy, catastrophic social forecasts, and declarations of new "saviors of the country." Economists and politicians suddenly have become "epidemiologists" and "scientists," and, for the most part, have only increased the anguish of the people. It is increasingly difficult to think under such circumstances, with many unknowns and variables at stake.

The media continues presenting a false alternative between "health" and "economy." This dichotomy, as presented by some politicians, big business, and the media, is false. In addition, it is worth highlighting a comment by an agency of the Portuguese government: Banks should establish zero profit until the end of the pandemic, by not benefiting from the misfortune of most citizens, but instead, helping the economic recovery. Scheduling the return to activities is a complex matter. It should be an "organized" tour with recommended preventive measures. We should consider three key sectors of today's society: the confined (with their various circumstances), the sick (in all its variables), and those on the front line (those who are at greater risk). It is of primary interest to plan a return to a "normality" that will be different from before the pandemic.

We must also consider the housing crisis (Fig. 9.8). While it existed before the pandemic, it has acquired new significance, meaning, and drama. Housing encompasses multiple issues, ranging from political to gender, from the functional to the economy, from the individual to the family, from health (physical and mental) to the relationship with the environment, and from the correspondences between private and public spheres. Urbanism and housing (rethinking the way to continue building cities and *in* cities) are undoubtedly two of the most significant challenges of the twenty-first century.

Reflection

Finally, all these questions need to be placed in a broader perspective. To begin, Jacques Rancière's consideration of the need to rethink and redefine the concepts of *democracy* and *rationality*, which until now have been the foundations of the "western world."[2] We should recognize that the idea of *democracy* carried the germ of inequality from its inception in Greece. A similar argument can be advanced

Fig. 9.8 Housing that shapes convivial spaces. *Photo* Jorge Mario Jáuregui

concerning the question of *rationality*, while seemingly followed by technical developments, today is perceived as meaningless.

As Umberto Galimberti says, "technique does not have an objective, it does not promote a meaning, it does not redeem, and it does not reveal the truth: technique *works*".[3] In addition, because its operation becomes planetary, it is necessary to review concepts of the individual, identity, freedom, truth, objective, and conscience, as well as those of nature, ethics, politics, religion, and history, from which it was nurtured. In the era of technology, the humanist era is now to be reconsidered or refounded from its roots. As enormous social inequalities become increasingly unacceptable, the ecological and political crisis produced by techno-scientific capitalism has led us to an impasse.

In this context, the concepts of *multinaturalism* (the mixture multiplying multiplicity) by Eduardo Viveiros de Castro,[4] and of *techno-diversity* (understanding of technology as a result of varied local knowledge and contexts) by Yuk Hui,[5] follow the direction of what Paul Preciado enunciates as the semiological and epistemic battle for meaning, for the definition and representation of reality, and the surge of digital authoritarianism.[6] What is the subjectivity of our time? This question acquires great resonance and meaning in our areas of urban planning, architecture, and landscape architecture. The problem extends from urbanism to living conditions and everything related to the environment. The question is not about globalization, but

concerns *mondialité* and learning from local contexts. The art of learning from differences and acquiring different habits proves that we can reinvent our design practices. There are huge challenges on the horizon.

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Chapter 10
No Time to Lose: Fostering the Predominantly Informal City in Latin America

David Gouverneur

Abstract Latin America is a highly urbanized region presenting high social inequity manifested in two different forms of urbanization: the formal and the informal or self-constructed city. In many countries, informal urbanism has become the dominant component. However, politicians, public agencies, professional practices, and academia still focus on the formal city. As cities grow larger, the disparities magnify, social tension rises, and the performance of the entire urban system is affected. While some successful programs and projects have been directed to improve living conditions of existing settlements, they can still be considered isolated cases as they are laborious and time-consuming or require interdisciplinary skills, onsite work, careful phasing, and proactive communal participation. All of these conditions seem to collide with the political agenda. While a widespread, inevitable, and ongoing process, informality is still considered by the establishment as negative, illegal or, in most cases, simply tolerable and neglectable. The clock is ticking. The COVID-19 pandemic has only further revealed the social and urban inequalities, but also the resiliency, resources, and malleability of the informal. We require new paradigms and effective action. This chapter is an urgent call to foster and accompany the emergence of new settlements as the seed of more equitable and balanced urban systems. It addresses pivotal territorial and performative conditions that could make a substantial difference in the future of the Latin American city. It also provides examples to illustrate how these new paradigms and effective responses can be deployed to adapt them to different site conditions.

Keywords Inequalities · Urgency · Fostering the informal · Approaches · Adaptability

Latin America is a highly urbanized region with the most extreme indicators of social inequity in the world. Inequality is manifested in two forms of urbanization: the formal and the informal or self-constructed city (Fig. 10.1). Inequalities also

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Fig. 10.1 Informal settlement of San Agustín, adjacent to a financial, cultural, and residential district, Caracas, Venezuela. *Photo* Carlos Teodoro Itriago

exist *within* the informal city. Recent settlements tend to be more precarious and underserved, while being located at peripheral and higher-risk sites than the older and more consolidated ones. As cities grow larger, their disparities magnify, social tensions rise, and the performance of the entire urban system is adversely affected. Yet politicians, public agencies, professional practices, and academia continue to focus their attention on the formal city.

After decades of bias against the informal city, naively thinking that informality could be reduced, halted, or eradicated by urban renewal and social housing programs, Latin American countries began introducing changes in their planning laws and practices. They acknowledged informal settlements as an integral part of cities and enabled the public sector to act upon them. Beginning in the late twentieth century, a range of successful programs and projects were envisioned to improve the living conditions of informal settlements in Venezuela, Brazil, Colombia, Bolivia, Argentina, and other nations in the region. The most notable case study is the remarkable transformation of informal settlements in Medellín, Colombia—a city that had been considered the most violent in the world during the 1980s.[1]

There is abundant literature on the topic. From the early stages, cases that have been most successful brought benefits not only to the communities, but to the cities at large. They share the following features:

- Proactive political support joins efforts of different municipal agencies
- High-quality technical teams work quickly sites and gain the trust of communities
- Selection of emblematic pilot projects, initial transformative moves of great impact, with community involvement in planning, design, construction, operational, and managerial aspects
- Careful phasing of subsequent actions, from site-specific interventions within neighborhoods, to actions involving adjacent ones and further initiatives operating at district, urban, and territorial scales
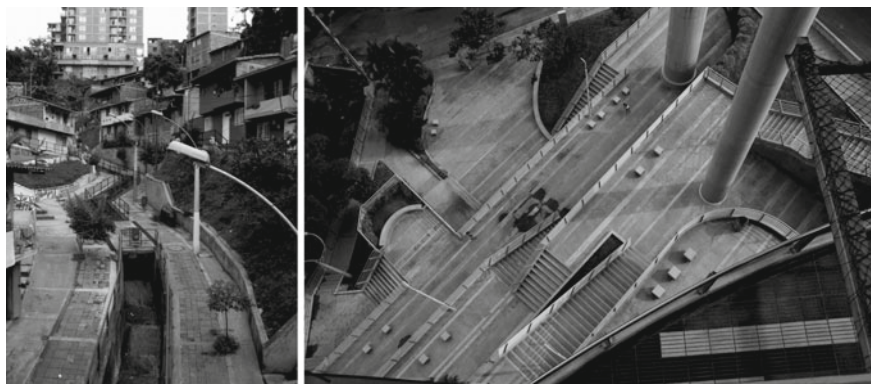
Fig. 10.2 Left: Liberated ravine and substitution housing, Barrio Santo Domingo, Medellín, Colombia. *Photo* David Maestres. Right: New public spaces below elevated Metro-cable station, Barrio San Javier, Medellín, Colombia. *Photo* David Gouverneur

- Monitoring progress, evaluating the contributions and limitations of projects, introducing adjustments, and building upon technical and performative experience to pursue new projects.

Most settlements that have emerged from squatting on non-urbanized land with precarious housing have evolved into very dense neighborhoods with limited open space, connectivity, infrastructure, and services. Some settlements, or parts of them, are located on high-risk sites (Fig. 10.2). Residents of these settlements invariably manifest that they aspire to better living conditions within their neighborhoods and do not intend to move. Understandably so, they do not want to leave their self-constructed homes built with great effort and care. These homes represent their most valuable asset and social support system.

Consequently, urban improvement projects can be viewed as urban surgical moves, carefully operating on the physical and social fabrics of neighborhoods. These interventions prudently carve out spaces from the tight urban fabric to introduce improvements. This usually entails the relocation of some residents of these dense districts with few vacant lots to do so.

Limited space and social attachment to the sites impose great limitations on what can be achieved. Projects that habilitate existing informal settlements can be very laborious and time-consuming, requiring interdisciplinary skills and onsite work. They are also expensive and demand community participation; there are technical limitations of what can be achieved. While these holistic plans have introduced great benefits to communities and work well at a neighborhood scale, they fall short in providing public spaces, services, job opportunities, and amenities on urban, metropolitan, and territorial scales. These larger urban components continue to be offered solely within the formal city.

Perhaps for these reasons, examples of successful initiatives continue to constitute isolated cases. Despite such success stories—and while transforming informality

remains the dominant and inevitable path—the informal city is still considered among the political, institutional, and professional mainstream to be negative, illegal, and unworthy. In the best of circumstances, in countries have left behind decades of dictatorship and have embraced democracy, politicians often capture votes by providing handouts for construction materials, as well as the painting of home exteriors, paving of streets, improved lighting, or providing very basic urban services, particularly during pre-electoral periods.

As argued by my colleague, Alejandro Echeverri, who served as Director of Special Projects in Medellín during the administration of Mayor Sergio Fajardo when the city's celebrated urban improvements began, "we had expected to see by now many more, similar, and better examples of informal-settlement improvement plans than those advanced in Medellín, but this has not been the case."[2] Such laborious projects collide with political agendas that typically favor quick payoffs, whereas working with informal settlements requires the engagement and scrutiny of communities toward reducing mismanagement and corruption. The good news is that many academic planning and design programs in Latin America regularly address informality in their theory courses and studios. This was uncommon two decades ago and an important step toward gradually changing biases against the informal city. It opens new ways of responding to challenges and dynamics with fresh planning, design, and managerial approaches.

The Challenge Ahead

Despite changing attitudes to existing informal settlements, how to cope with the ongoing and exponential expansion of informality remains a major challenge, particularly with regard to the emergence of new informal settlements in non-urbanized territories. Leading world institutions project that the population living in self-constructed settlements will double from the current estimate of 1 billion to 2 billion over the next 25 years.[3] It is also expected that the economic impact of COVID-19 will have a major effect on the economies of developing countries, particularly in Latin America. It may increase the percentage of the population unable to access the formal real estate market, including the highly subsidized social housing programs, and thus, accelerate the growth of new informal settlements. The additional population anticipated by densification of existing self-constructed neighborhoods, vis-à-vis those that will occupy non-urbanized land, will vary according to the conditions of each context. A safe estimate is that at least 330 million inhabitants will start the informal urbanization process by occupying a new plot of land.[4] If left unattended, they will replicate the patterns of preexisting settlements, aggravating social tensions, and increasing environmental stress.

This chapter is an urgent call to foster the emergence of new settlements as the seed of more inclusive and balanced urban systems. It addresses pivotal territorial and performative conditions that could make a substantial difference in the future of the Latin American city. We require new paradigms and effective action. The way we

envision the initial occupation of these new self-constructed settlements, and their evolution will have a major consequence on the welfare of hundreds of millions of new urbanites on the performance of existing cities and environmental systems.

The Informal Armatures Approach (IAA)

In the book *Planning and Design for Future Informal Settlements: Shaping the Self-Constructed City*,[5] and the updated and expanded version *Diseño de Nuevos Asentamientos Informales,* I suggest a preemptive take on such a challenge, that I call the Informal Armatures Approach (IAA).[6] It can be considered a compendium of planning, design, and managerial tools and recommendations that could facilitate sustainable conditions for the emergent informal city in the developing world. While the concepts and suggestions herein are generic, most of the case studies illustrate how the approach can be adapted to diverse conditions in informal settlements of Latin America.

The main drivers of IAA stem from taking into account: (a) the biases against the informal city, (b) the exclusionary effects of conventional urban planning within a real-estate-driven market, (c) the lessons derived from the seminal plans and projects for the improvement of informal settlements in the region, (d) the response to contemporary environmental concerns, and (e) the managerial, economic, and technical weaknesses in the region. The IAA can be considered a hybrid method that merges the positive aspects of informality, such as its vitality, malleability, and community-driven practices, with aspects that the informal city cannot achieve on its own.

Contrary to the operations of a surgical nature required to improve living conditions in existing informal neighborhoods, the IAA seeks to perform preemptively, assisting the emergence and accelerating the transformation of new settlements. The main assumption is that acting preemptively offers the malleability to achieve more diverse, quicker results with less technical, managerial, and financial efforts than habilitating the settlements that have emerged spontaneously and with high degrees of consolidation.

An analogy can be made between the IAA and how mollusk colonies evolve by support systems, such as the roots of mangroves in a healthy milieu of water, nutrients, and light which allow the individual organisms—as the self-constructed dwellings—to prosper. In this approach, the support systems are deployed on non-urbanized land to attract settlers to favorable sites, assisting their transformation from early phases of occupation. This includes the protection and adequate use of environmental systems, securing the spatial requirements for public spaces, infrastructures, services, and amenities of local, urban, and metropolitan scales. Basic neighborhood facilities are provided in the initial phases of occupation, which can be gradually adapted to changing communal expectations or incorporate more complex components in response to the demands of larger urban and territorial systems. The approach relies on a combination of spatial and performative conditions which include:

Fig. 10.3 Urban design plan and peripheral Informal settlements, in Ciudad Fajardo, Venezuela. *Photo* Luis Sully

Assembling Public Land

Limited access to land to accommodate the urban demands of less-affluent people is perhaps the main factor that determines the inadequate location of the settlements. This extends to constraints in providing the public realm (open spaces, infrastructure, services, etc.), while exacerbating levels of risk, physical segregation, and social exclusion. Thus, the most effective mechanism to counteract the negative effects of real estate-driven urbanism is to gather public land. However, most Latin American countries do not acquire land before the urban plans are enacted or embark on public–private partnerships with this goal. Furthermore, they do not rely on eminent domain to avoid political clashes with landowners, who in many Latin American countries are oligarchs who inherited the land from their colonial-era ancestors. As a result, urban plans create plus-value for the affluent and leave the public sector disarmed to attend to a significant population's urban demands.[7] Land assemblage can be considered an upfront subsidy to avoid paying a higher price down the line and a turning point to foster more inclusive and environmentally sound cities (Fig. 10.3).[8]

Public land-banking allows for steering urban growth, reducing habitat loss, and environmental degradation, favoring a more equitable amalgam of social/income patterns within cities. It also offers the flexibility to deploy a robust public realm, infrastructure, services, and diverse users. As will be explained herein, not only for the emergent informal settlements, but also compensating for lacks within the adjacent existing self-constructed neighborhoods.

Multi-Scalar Armatures: A System of Design Components

The IAA envisions the deployment of a system of design components that will enable structuring the public realm, while providing secure terrain for the self-constructed
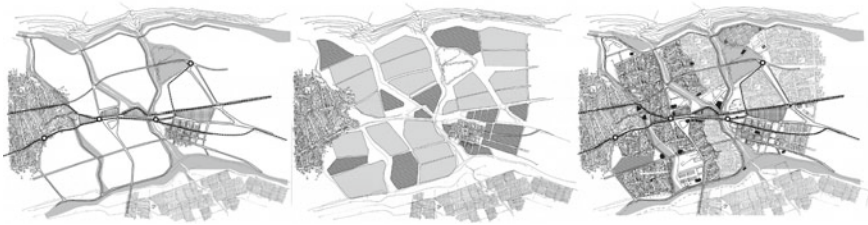
Fig. 10.4   Informal Armatures design components. Left: Protector and Attractor Corridors. Center: Receptor and Productive Patches. Right: A Composite of Corridors, Patches, and Stewards. Diagrams: David Gouverneur

dwellings. It gradually incorporates other urban uses/components that rarely occur spontaneously in the informal city, such as quality education and health services, manufacturing/industrial, parks, sports, or recreational facilities. In later phases, the approach allows part of the assembled public land to incorporate social housing programs and market-rate residential and mixed-use developments. The goal is to homologate basic living standards and urban performance between the formal and the informal cities, reducing spatial, income, and social segregation.

Testing the efficacy of the IAA on the urban–rural frontier also offers elasticity and advantages that provide new settlements with a robust environmental and agriculture-based support system. This nourishes them and propels their rapid transformation, operating at territorial, metropolitan, urban, and neighborhood scales. To do so, the IAA considers deploying three categories of design components, namely Corridors, Patches, and Stewards (Fig. 10.4).

Corridors

Corridors are intended to preconfigure the public realm, acting as the organizing framework of the urban system. They have been divided into two categories—Protector Corridors and Attractor Corridors—and perform different roles. Protector Corridors foster the preservation, rehabilitation, enhancement, and smart use of the environmental assets of the sites. This goal is particularly relevant in peri-urban locations, since natural habitats, environmental assets such as areas of biodiversity, wildlife corridors, vegetated patches, watersheds, and rich agricultural land are usually quickly eroded in non-fostered informal occupations. They also allow safeguarding the sites that, if urbanized, would place the communities at risk of flooding, landslides, volcanism, seismic activity, or fires. Communal risks also include the hazards of brownfields, high-voltage lines, and gas pipelines, as well as the effects of climate change.

This McHargian mapping operation alone would not suffice to protect these assets from predominantly informal occupation. The IAA suggests that these green corridors can be best preserved if they are associated from early stages with uses that are deemed relevant to the settlers, such as community gardens, recreational areas, or water wells, and associated with communal Stewards, as will be later explained. In addition, urbanization pressures can be reduced or steered away from the Protector Corridors by simultaneously deploying Attractor Corridors.

Attractor Corridors are intended to draw urbanization toward favorable locations. They are usually associated with mobility, infrastructure, and service strands adjacent to sites that are likely to become areas that will densify quicker, incorporating greater diversity of residential, commercial, manufacturing, institutional uses, and civic activities. These attractors perform better when connected to the existing adjacent settlements' activity systems and nodes, and when located in a more central location within the new settlements, to serve a large territory and population.

The nature of Attractor Corridors' initial uses/design components will vary according to the different contexts. They can provide water, food, electricity, building materials, and technical assistance, or they can be used as temporary shelters, offering settlers a sense of safety, peace, and protection. In addition, they can become informal markets, sports, and festival venues. Attractor Corridors can predefine the location of future transportation and mobility systems, public spaces, and communal services. One of the challenges for facilitators of the approach will be to consider how the design of these corridors (particularly their sections) may gradually morph and respond to changing demands.

Patches

Patches are land for urban infill—the result of informal or formal urbanization processes—and supported by environmental and urban services provided by the Corridors. They can be predominantly residential areas or incorporate different uses, private or public, of a local, urban, or metropolitan nature. Patches have been subdivided into two categories: Receptor Patches and Transformer/Productive Patches. Receptor Patches are tracks of land that are made available to facilitate the self-construction of homes, neighborhoods, and communal services. Even if the communities replicate local, non-fostered patterns of informal urbanization, the overall performance of the newly urbanized territory will be better thanks to the support of the Corridors.

Even so, improved living conditions can be attained within the Receptor Patches if the facilitators of the approach, working hand-in-hand with communities, pre-design the grid layout, open spaces, infrastructure, lot sizes and configuration. This strategy should include providing initial housing shells, examples of how to manage the expansion of the dwellings, production of onsite construction materials, and technical solutions to reduce seismic risks or fires.

A good reference for this type of supplementary assistance is the Site and Services projects that began in the 1980s, as the PREVI Project on the southern periphery of Lima, Perú. Whatever the circumstance, the Receptor Patches will provide settlers at an early stage of occupation lots for their self-constructed dwellings, not exposed to natural risks, legally secured, with access to basic infrastructure, and supported by the facilitators of the IAA. These combined conditions will allow for healthier and quicker growth of dwellings and neighborhoods.

The location and dimension of the Transformer/Productive Patches should be predefined in the initial layout of IAA territories. They are intended to secure land that will gradually incorporate diverse urban components—of a district or a metropolitan scale—propelling them to conditions offered by the formal city. The task here is to secure these sites from unwanted occupation by providing uses that are meaningful to communities at different stages of evolution, consolidation, and densification, as well as in response to changing demands. For instance, some Transformer/Productive Patches may be destined to offer basic services such as community gardens, recycling, composting sites, informal markets, playgrounds, or sports areas during early phases. In later stages, as the population augments and settlements expand, they can become sites for technical schools, universities, parks, manufacturing, industrial uses, sports complexes, shopping, and amusement facilities, transportation centers, or institutional areas. They may even be destined for market-driven residential, office, commercial, or mixed-use developments.

Another strategy for the Transformer/Productive Patches may be to include, in earlier phases, metropolitan uses such as a hospital, educational centers, or parks that begin by serving the population of the existing settlements and residents of other areas of the city, which can accelerate the transformation of the IAA fostered territories, increasing activities and diversifying the number of users that will converge in the district. The Corridors and the Transformative/Productive Patches may also help enhance the sense of place and spatial definitions of neighborhoods, avoiding a single dominant residential use and the monotonous urban continuum that characterizes extensive informal areas, facilitating the assemblage of a robust mosaic of informally and formally urbanized areas.

Stewards

Stewards are conceived as custodians both within Corridors and Patches that are expected to perform different roles: (a) securing unwanted occupations, (b) keeping urban areas from expanding into environmentally sensitive areas, (c) containing different uses and spatial conditions working closely with the communities, and (d) facilitating the transformation of different components to manage changing infrastructural, service, production, and open space demands. The scale, morphology, performativity, permanence, or transformation of Stewards may also vary within each context. However, it is suggested that they should be institutions, NGOs, community organizations, cooperatives, etc., held in high regard by the settlers. While spatially,

Fig. 10.5 Left: Protector corridors for young informal settlements in Quitumbe, Quito. Project: Lanmuzhi Yang. Right: informal armatures proposal for a former quarry site, Medellín, Colombia. Project: Adam Achrati

Stewards may be associated with specific edifices in contrast to the more linear and systemic nature of Corridors and the urban fabric of Patches. These pinpointed components may influence broader territories. For instance, youth centers can hover over sports fields, schools over agricultural plots, and so on, by acting as gatekeepers.

Larger tracts of land under stewardship may require to be initially fenced until a physical boundary is no longer required, as they become protected by engaging communities, or when these larger open spaces are appropriated for other uses. The library-parks of Bogotá and Medellín are good examples of stewards, respected and intensely used by the community. Working as a network, Corridors, Patches, and Stewards can foster a rich urban ecology with the ability to transform and adapt over time, compensating for the limitations of—business as usual—informal urbanization, diminishing its negative aspects while boosting the dynamism and attributes of the self-constructed city (Fig. 10.5).[9]

Additional Contributions of the IAA

The previous section explained the main advantages of envisioning self-constructed urbanization preemptively, with environmental, urban, and managerial support systems, considering the appropriate location, scale, morphology, and sequencing of morphological components. Combining these factors will make a significant difference, allowing the neighborhood to achieve compelling livability conditions. Equally important will be the added value derived from processes that these design considerations sustain. Perhaps the most relevant contribution is that the IAA can situate informality at the mainstream of political and technical discourse, offering tools that can be easily implemented, providing agencies with tools to implement this process.

In most Latin American nations, major investments in urban infrastructure and services, as well as the planning and regulatory efforts to control urban affairs, are centered on the formal city. The IAA seeks to change the bias, focusing on the
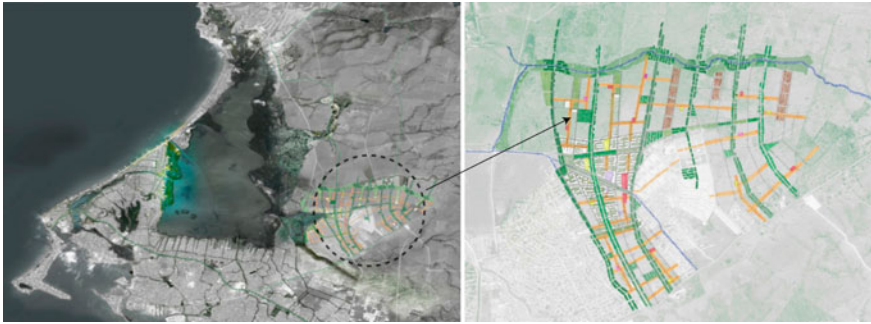
Fig. 10.6   Botanical informal armature proposal for Cartagena, Colombia. Project: Ishaan Kumar

hybrid and more complex nature of these cities. Changing perceptions and attitudes of the environment and socio-cultural divide are as important as territorial and spatial aspects. The reduction of disparities among the self-constructed and formally urbanized areas will help to erode cultural barriers. Furthermore, the fear of not knowing and trusting the other is oftentimes the root of inequalities and conflict.

The IAA seeks to dissolve the artificial and inconvenient fracture between the environment and the urban systems, favoring a middle landscape: informal-formal, urban-rural, territorial-local. Protector Corridors address an ecological agenda that is at the core of the contemporary urban agenda, as communities from early phases of settlement can become aware of the benefits of engaging with environmental systems: reduction of risks, protection of water sources, protection of agricultural lands, preservation of agricultural practices, better climatic conditions, healthier communities, and spatially gratifying urban scenarios, to mention a few (Fig. 10.6).

The approach seeks to foster more balanced conditions through the urban systems, where neighborhoods or larger districts can achieve a higher degree of self-sufficiency of basic services, employment, and amenities, reducing the stress on the traditional urban centralities as well as the transportation and energy demands. This also translates into enhanced and productive leisure time for residents.

The approach capitalizes on the creativity, self-determination, energy, time, and resources of the communities. It boosts their capabilities and allows self-constructed settlements to achieve homologous, or even better conditions than those offered by the formal city, making them more self-sufficient and resilient. It envisions a decentralized planning, design, construction, management, and governance model where communities play a major role in the decision-making processes that favor ongoing practices (Fig. 10.7). The process facilitates the agencies' role, whether from the public sector or the NOGs, allowing them to gain experience to foster similar initiatives on other fronts.

Fig. 10.7 Left: informal armatures proposal for a large track of underutilized agricultural land. Right: site and services proposal, for both Villa Nueva, Ciudad de Guatemala. Project: Zihan Wang and Xu Han

Some Obstacles

As aforementioned, the main obstacles are persistent biases against the informal city: (1) the exclusionary effects of real-estate-driven urbanism in contexts in which public land is scarce and land-banking is not usually practiced; (2) the inadequacy of the technical and managerial tools to cope with the complexities, scale, the velocity of occupation and transformation; and (3) the degree of spatial, social, and performative disconnection of settlements from the formal city. Calling attention to the consequences of inaction, and training facilitators that can enable the transformation of the settlements using the Informal Arnatures approach are become pivotal factors to ensure the implementation of the proposals. The approach's success may require overcoming both the inadequacies and disconnection between the conventional political–institutional, academic, and professional urban practices that usually operate in sales, as well as finding the defectives ways to take into account the needs, aspirations, vitality and wisdom of the settlers of the residents of the self-constructed communities.

Two key factors may help in achieving this goal. Proximity: my colleague Alejandro Echeverri frequently emphasizes that all initiatives dealing with self-constructed communities must be carried out onsite, fostering trust and respect between facilitators and communities. Agility: is also a crucial factor since conventional planning, design and research, and institutional responses that are sluggish in relation to the dynamism of informality.

After being in academia, professional practice, and public service for over 40 years, I have become skeptical of traditional approaches when it refers to acting upon the informal city. In particular, when research and projects involves time-consuming validation of data to formulate criteria and projects, but that does not result in effective contributions to the well-being of the communities. Few developing countries have reliable data concerning demographic, socio-economic, infrastructural, and service indicators of the informal settlements. And when it does exist, since the settlements are in constant flux, it becomes rapidly outdated. Hence, trained

eyes, quick sampling, and projections, as well as the simulation of projections, may be a more effective starting point which leads to quickly formulating criteria and paths of action. Some initiatives will succeed, others may not, but either scenario is better than no action.

Some years ago, I wrote an article for a conference on informal settlements held in Cairo. The article was rigorously scrutinized for six months by evaluators to fit adequate academic standards until it was finally accepted. The article won an award for the best technical article in the event. I estimated that during the six months of revision, over 250,000 inhabitants had begun to occupy non-urbanized land in Cairo to self-construct their urban dreams. Meanwhile, the establishment was evicting traditional informal settlements from central locations of the city, relocating them in so-called sustainable social housing projects located dozens of miles away at the urban fringe, far from jobs, transportations, and social ties. Residents were forced to pay mortgages, utilities, and maintenance costs that they could not afford.

Academia does play a pivotal role in training the facilitators of alternative responses, probably in line with the IAA, who will have to work in cross-disciplinary teams—also an uncommon practice in Latin America. Silo-like education frequently translates into an equally unarticulated and institutional professional response. Furthermore, professions centered on territorial, infrastructural, and spatial aspects tend to lack the political, communication, and bonding skills that are indispensable to engaging urban actors. Humble and trust-gaining attitudes are critical for working with communities that self-construct their own habitats.

Facilitators should have the ability to respond to settler demands in the early phases of occupation while the neighborhoods consolidate, increase in population, and shape their aspirations. At the same time, they should envision the broader urban metropolitan and territorial demands that are beyond the direct involvement of the settlers. Such complexities enhance the importance of training and capacity-building, the selection of pilot projects, quick methods of monitoring changes, and the transfer of know-how from one experience to another.

Decades of rigorous research, frequently from an anthropological, socio-political, or planning perspective, allowed to understand the forces that propelled the spontaneous growth of informal settlements worldwide from the mid-20th. This revealed greater understanding of their assets and weaknesses, as well as how alien they evolved in comparison to the technical, economic, managerial, and legal practices of the establishment.[10] However, these studies did not contribute to improve living conditions for their residents. More recently, politically and technically supported pilot projects have gained international recognition such as those advanced in Bogotá, Medellín, Río, and La Paz. These projects were aimed to significantly address weaknesses and tap latent potentials, with innovative planning, design, managerial approaches, and contributions that have been highly appreciated by the communities. In turn, these initiatives have informed new directions in applied research, as well as academic, institutional, professional practice, and communal involvement and leadership.

However, dealing with the emergence of new settlements to proactively assist what will become some of the largest and most complex informal agglomerations in Latin

America remains taboo and an unexplored territory. A high social, economic, political, and environmental price will be paid if the exponential growth of the informal city continues to be ignored. Both the existing settlements, and those that will emerge, will not support the wellbeing of their residents, while at the same time, negatively impact the broader urban and environmental systems. There is no time to lose. The Informal Armatures Approach may be an effective way to facilitate this goal.

While developing these notions, leading to my publications and academic work, I had the opportunity to interview Prof. José Antonio Abreu in Caracas. He was the creator of the now world-recognized youth education program, El Sistema, that has introduced classical music in informal settlements as means to counteract social exclusion, violence, and despair.[11] I shared my ideas with Prof. Abreu and asked him if he thought that El Sistema could serve as an early Steward of an IAA fostered territory. He said, "go for it on two fronts: speak with my team that will advise you on the spatial and functional demands of simple construction. Begin musical training for kids at the youngest age possible—located in your Patches, and simultaneously, let us select a site, under a huge tree that can become an iconic public space of your Corridors. This would offer the community concerts produced by youth orchestras that we have created in over 400 music centers around Venezuela. Stewardship of self-esteem, beauty, joy, and peace are as important as water, shelter, and food."

Endnotes

1. Medellín was granted the "Innovative City of the Year" award, organized in 2013 by The Wall Street Journal and Citi, as the most creative city of the year, from a shortlist that included New York City and Tel-Aviv. This was one of many prizes and praises that Medellín, considered for decades the most violent city in the world. Medellín exemplifies that even under the most adverse conditions urban improvement is possible, and in a short time, becoming a reference for many developing nations and particularly in relation to the improvement of informal settlements. See Wall Street Journal. Wall Street Journal, http://online.wsj.com/ad/cityoftheyear; accessed August 02, 2013.

2. From a video interview in Spanish of Alejandro Echeverri and David Gouverneur for Lautaro Ojeda at the Centro de Investigación de Vulnerabilidad e Informalidad (CINVIT), Universidad de Valparaiso, Chile, 2018; https://www.youtube.com/watch?v=9En3Ig1uSOc; accessed March 3, 2021.

3. Gouverneur, David, *Planning and Design for Future Informal Settlements: Shaping the Self-Constructed City*, Oxford: Routledge, 2015. See in particular Chap. 1, "Attempts to deal with the urbanization challenges of the developing world."

4. There are no specific studies that sustain such an estimate. In fact, one of the main aspects that differentiates the self-constructed from the formal city is reliable data, since the settlements are in constant transformation and many residents chose not to provide accurate census information. My estimate is made based on over 30 years of observations of informal settlements in Latin American cities. In most cases, the self-constructed dwellings consolidate and

densify, reaching an average of 3–4 stories housing a similar number of families per lot. Such building typologies allow the users to easily gain access to the upper levels and the construction to be relatively structurally stable.

5. Gouverneur, David, *Planning and Design for Future Informal Settlements. Shaping the Self-Constructed City*, Routledge, Taylor & Francis Group, 2014.
6. Gouverneur, David, *Diseño de nuevos asentamientos informales.* Medellín: Fondos Editoriales de EAFIT, 2015.
7. From 1991 to 1996, I was National Director of City Planning at the Ministerio del Desarrollo Urbano de Venezuela (MINDUR). We enacted hundreds of urban plans assisting municipal governments. FONDUR, a branch of this agency, was one of the few institutions in Latin America that was in charge of land-baking. However, land acquisition was aimed to formal subsidized public housing projects built by developers, and not for sites, services, or self-constructed neighborhoods.
8. In Guatemala, the eminent domain law establishes that to assemble public land, administrative procedures must have Congressional approval. Red tape and private/political interests hinder the process.
9. See video recording by D. Gouverneur, "Seeding Change in the Latin American Landscape," Weitzman School of Design, University of Pennsylvania, 2020, which illustrates how the informal Armatures Approach can be adapted to different site conditions; https://drive.google.com/file/d/1kA-XlGLIw4qoH8epyPIkl4QleafCrE7F/view; accessed November 30, 2020.
10. See Davis, Mike, *Planet of Slums*, Verso: London, 2005.
11. There are over 250 hundred children and youth symphony orchestras in Venezuela alone under the umbrella of El Sistema, and many others in countries that have emulated this experience. I was able to interview Professor Abreu in Caracas in 2015 while I was completing Planning and Design of New Informal Settlements: Shaping the Self-Constructed City.

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Chapter 11
Exploring Critical Urbanities: A Knowledge Co-Transfer Approach for Fragmented Cities in Water Landscapes

Flavio Janches, Lisa Diedrich, and Diego Sepulveda

Abstract The urban conditions of many metropolitan regions in the Global South are marked by growing informal settlements, growing inequalities, and socio-spatial fragmentation. They face alterations of their natural-spatial context imposed by climate change and new hydrological patterns. Knowledge is needed to direct their transformation toward more sustainable futures. Academia plays an important role in this knowledge production process that bridges disciplines and geographies. It ensures links to professional actors, public authorities, and civil society in their respective localities. This chapter introduces the adaptation of a more collaborative, trans-disciplinary, and multi-directional working method called "Beyond Best Practice" that raises research questions around ever-evolving, multi-actor collaborations from a design thinking perspective. These research experiences allowed us to promote an open-ended, co-transfer thematic, and methodological knowledge process by developing and testing ideas in real-world laboratory situations. Its results can be redirected to the Global North, where patterns of informality increasingly characterize hotspots of critical urbanity and, in turn, would benefit from knowledge sourced in the Global South.

Keywords Informal urbanism · Trans-disciplinarity · Collaborative design process · Transferring knowledge · Site specific

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Like the health crisis of the first half of the twentieth century, the coronavirus pandemic has called into question aspects of urban life, determined not only by conditions of health efficiency but also by factors that structure our coexistence. The close relationship among density, overcrowding, and the spread of the virus demonstrates how the health crisis has brought about a change in the dynamics of communities. In many cases, this has meant the risk of "accentuating a process of stigmatization and segregation of populations that inhibits the capacity of cities to consolidate the coexistence necessary to confront this or any other known or exceptional conflict."[1] Pandemic containment policies, therefore, face the dual challenge of preventing the spread of the disease, as well as the creation of new physical and symbolic carriers to the strengthening of mutual aid systems.

As such, the new reality determined by the needs of the pandemic is also an opportunity to consider how to "reflect on the habits of mind that lie in the shadow of everyday academic and professional structure; to explore meta-critical reflections determined in translations and transfers between two or more domains of practice."[2] Although the research work presented in this chapter was undertaken before the onset of the pandemic, considering it in relation to this crisis can help us to re-evaluate its objectives. It can be applied to new parameters associated with attitudes, capacities, rights, and obligations for people to organize their own survival dynamics.

The work was carried out, integrated, and implemented into an active model of co-transference between academia, local community, and local government. These actions contributed to informing, conceiving, improving, and evaluating possible generative strategies for planning and implementing change in known and unexpected critical conditions. The experience presented here seeks to advance the adaptation of a more collaborative, trans-disciplinary, and multi-directional working method. As a constantly evolving multi-stakeholder collaboration, it is possible to develop and test ideas, as well as to co-transfer thematic methodological knowledge.

At the same time, it progresses in models of transdisciplinarity—from a specific contribution in the co-development of evolutionary possibilities of evaluation, communication, and discussion—to enhance these models and contribute to the broadening of possible future actions. The limitations recognized in the implementation of trans-disciplinary processes, particularly in the definition of actors to be involved, their particularities, and their different languages and etymologies, are tested on the use of co-evaluated spatial designs. These take the form of spatial configurations, within problems caused by climate variability in areas of social risks, such as districts with informal settlements in areas at risk of flooding and/or high pollution. This work is conceived as an activator of co-transferring processes. It is structured on dialogue platforms with inhabitants and other existing actors in each real-world laboratory situation. Its value lies in aspects that are jointly produced through the interaction of multiple actors and disciplines. It includes how the work can detect, interpret, and communicate conceptual and shifting aspects that determine alternative design and planning processes.[3]

Based on this iterative (pre-designed) method of collaborative thinking and conversations between trans-local and trans-disciplinary academic institutions, we

elaborate a non-cyclical and continuous research process to understand and experiment "…in a critical otherness, alternative methodological and design opportunities to our disciplinary practices."[4]

From integrated research approaches between urban design, strategic planning, and landscape architecture, the work fostered a new balance of distribution and access to conditions of cooperation and mutual aid between the communities. These actions were convened through existing social programs in the municipality—as well as between the community and environment—to consolidate the accessibility, stability, and permanence of the proposed changes. The methodological frameworks and proposed transformative strategies are co-transferable to contexts with comparable conflicts and conditions of social exclusion, environmental crisis, and urban fragmentation. The value of the results obtained is also expressed in their capacity to be re-signified as viable models of urban transformation; they produce concepts and processes applicable in more than one place and over time.

Finally, it is also important to highlight the use of spatial design as a research methodology because the creative process can influence change through new imaginaries and narratives. In critical contexts where actions taken in one sector have consequences in the other, design becomes relevant as it allows us—using the concepts of Richard Foqué—to develop a "working hypothesis that can be tested, adapted, adjusted, and replaced without being true or false, while coexisting with other hypotheses."[5] Contrary to traditional empirical research, the design process as research explores future solutions determined by factors that can be adapted, corrected, or ignored according to the process of socio-territorial evolution. In this sense, the creativity of the project is not focused on the specific design, defined in its morphological aspect, but on the ability to redefine components of integration, growth, and environmental reconversion. Understanding urban design as a research process becomes particularly relevant in the working context. It seeks to influence urban and social realities through existing and prospective factors that can inform future development processes.

This view of the value of design thinking as a method of conversation, cooperation, speculation, and re-valuation is based on theoretical principles and concepts developed by Diedrich, Kahn, and Lindholm, professors in the Department of Landscape Architecture at SLU University in Malmö. These concepts were published in the paper entitled, *Beyond Best Practice, Re-valuing mindsets and re-imagining research models in urban transformation.* This work, defined as a co-evaluated urban transformation process, is structured around the value of the process itself. It is used both to define the framework for discussion and agreement, as well as to promote the transfer of knowledge generated in situ.

Our theoretical framework was based on constructing common values posed by co-production or co-creation theories,[6] recognizing guiding principles to reveal, and co-construct collective values and define shared benefits. The methodological approach to building development-adaptation strategies addressing climate change and urbanization in socio-environmentally critical conditions is also based on principles of collaborative planning.[7] It seeks to activate a co-participatory approach (structured as an ongoing collective assessment between academics, local government officials,

and residents) to the specific problems and opportunities for replicability in contexts with comparable conditions.

Based on the recognition of this partnership of various academic disciplines and local stakeholders, as a platform of shared learning,[8] a collective agency can be validated as a process of change. It recognizes the transformative adaptations co-defined as a multi-directional enabler of knowledge co-creation.[9] In this way, it is also possible to ensure the vision of a long-term systemic change that responds to the dynamic variables of natural and social systems. It contemplates the need to activate and integrate with the evolution of development and adaptation to climate variability, a greater and more diverse variety of stakeholders for local socio-environmental transformation over time.

Local Elements as Conditioning Factors

One of the goals of our trans-disciplinary research project was to understand community capacities to produce integral development processes both in the communities and in the study environment. Through meetings and interviews with the local government and social institutions, it was possible to recognize and interpret the social reality, current needs, and demands, as well as their relationship with conditions of the territory. The value of this interview process, at both local and regional levels, was that it made clear what Javier Auyero and Debora Swistun refer to as "…the relationship between objective space and subjective representation (habitat and habits), that represent the diversity of coexistence and the local capacity to interact with authorities and other stakeholders in order to achieve common goals."[10]

Recognizing the level of social conflict, the immaturity of the planning process, and the weakness of institutional capacities, as well as the environmental and topographical conditions existing in the working area, we were able to access (through direct participation) local knowledge and relevant factors to propose alternatives for the community. For Imparato and Ruster, this type of intrinsically co-produced work helps to "establish clear channels for participation in decision-making to give people the opportunity to influence actions that shape their lives."[11] The value of the collective diagnostic process is based on its capacity to associate responses with values defined by different local actors and, thus, giving overall coherence to actions and collective identification of what is proposed. This understanding of local conditions is determined by three main premises:

- Understanding existing socio-spatial experiences, proposals are defined in the values of everyday life and cultural significance of their spatial representation
- Recognition of the volatility of the challenges to be solved, due to uncertain changes in the possible environmental crisis, as well as in existing social behavior
- Community participation as a facilitator of the process of change, negotiated agreements can define the design and construction of proposals and their long-term sustainability

Based on this analytical criterion, transformation strategies may be organized in agreement with two systems that determine the manner of occupation and use of the territory—public space and the dynamics of movement. The combination and integration of both systems allows change to consolidate their objective through the balanced distribution of urban activities and services. It strengthens existing or potential dynamics of socialization between communities and with the environment. Proposals define the scenarios, uses of a place, and how it adapts to the inhabitants' expectations and way of life. Reversing the process of decay and abandonment of the urban/environmental context is determined not only by what is proposed but how its "non-predetermined evolution" complements, completes, and gives life to it. Consequently, the coexistence of what is diverse and different makes it possible as a balanced and equitable redistribution of urban and environmental resources to improve the conditions that determine quality of life.

Co-create and Co-transfer Knowledge

Based on this theoretical/methodological framework, collaborations between disciplines, and conversations involving comparable conflicts and initiatives, we developed a trans-disciplinary research project between the Urban Design FADU-UBA, Landscape SLU, and Strategic Planning TU Delft programs. Our Buenos Aires-based project aimed at promoting integrated development strategies in areas characterized by critical socio-environmental conditions. Using the technological, methodological, and design components of the "Emscher Park Narrative"—a study that looks at long-term transformation of the Emscher River Basin (ERC) in the German "rust belt" since 1989—as a model, our project applied its strategies to the Reconquista River Basin (CRR) in Argentina. Both territories continue to suffer from disproportionate risks due to dysfunctional infrastructure—polluted by agricultural, industrial, and/or housing waste. Both are subject to extreme climatic effects induced by heightened climate variability.

Like the ERC region, the CRR is characterized by challenges related to industry, informal settlements, and a lack of flood control infrastructure. Historical deficiencies in state-led spatial planning have led to the expansion of unregulated informal settlements, waste facilities, and industrial complexes on flood-prone land. In the context of climate change, issues of concern include increased risk of extreme floods and inequalities related to their impacts.[12] The extremely high level of river pollution strongly affects the urban population and creates serious health problems.

Building on the success of a powerful narrative observed in the German experience, we developed a series of initiatives that as methodological and technological tools offer responses to socio-territorial fragmentation and environmental deterioration in the Reconquista River region. The experience in the Morón River (a tributary of the basin) as a "living laboratory space" allowed us to investigate the issue of waterscape and its relationship to unregulated settlements. The specific characteristics of

the area, inhabitants, and governance were co-evaluated with European experiences and applied to this new context (Fig. 11.1).

The research fostered a new narrative that integrated initiatives for the government and local community. Therefore, the "linear park for environmental control and remediation" along the Morón River established collective objectives to restructure urban space and new dynamics of urban life. The range of development and management strategies devised as "top-down" and "bottom-up" initiatives proposed an open process of evolutionary transformation, combining large-scale hydrological projects with small-scale neighborhood intervention projects. These interventions were placed in public space and aimed at integrating continuous and concurrent processes of research and innovation. They interacted with public–private and institutional–personal partnerships (Fig. 11.2).

The most significant result of this project is its unique contribution to updating knowledge on tools and techniques of local strategic planning procedures (Fig. 11.3). They are more agile, as well as adapted to local conditions that can be transferred to landscapes with comparable socio-territorial conditions. A critical examination of the conditions of the area, development perspectives, and sustainable responses was used as the basis for addressing conflict (Fig. 11.4). These points offer a way to reach and recognize the risks and potentials of each designed scenario.

By recognizing these dynamics, work was carried out by students from three academic institutions and disciplines. Students proposed different strategic processes of urban regeneration based on socio-economically productive activities, capacities, and innovative environmental technologies based on three main components:

- Strategic vision in water management at regional and local scales
- Strategic vision on the dynamics of activities and spatiality of the urban fabric
- Strategic vision of specific community development interventions

In this way, the multi-scalar approach of our work took advantage of the relationships between different actors. It consolidated a balanced, short- and long-term vision with impacts on both local and regional scales. To organize and establish coherence in the integration between strategies, each project included two dimensions of work aimed at improving the socio-community conditions of informal neighborhoods. Projects addressed immediate contexts and sought to recover and redefine water landscapes.

The interrelationship between the two components opened a new strategic and aesthetic dimension of urban design. It is based on continuous and interdependent evolutionary processes, appealing to all involved people's senses and their imagination. Termed "radicant,"[13] this idea of urban design prevents from addressing sites in radical ways, i.e., through erasing everything and constructing it anew (the modern tabula rasa approach) or through preserving everything in a historic freeze frame (the post-modern museumification attitude). Instead, urban sites are explored in multiple iterations with multiple stakeholders from different origins and perspectives. These actions work together to transform urban areas consecutively.

Without a predefined end scenario, even without the idea, the urban transformation process would never come to an end. The open endedness of radicant design rejects
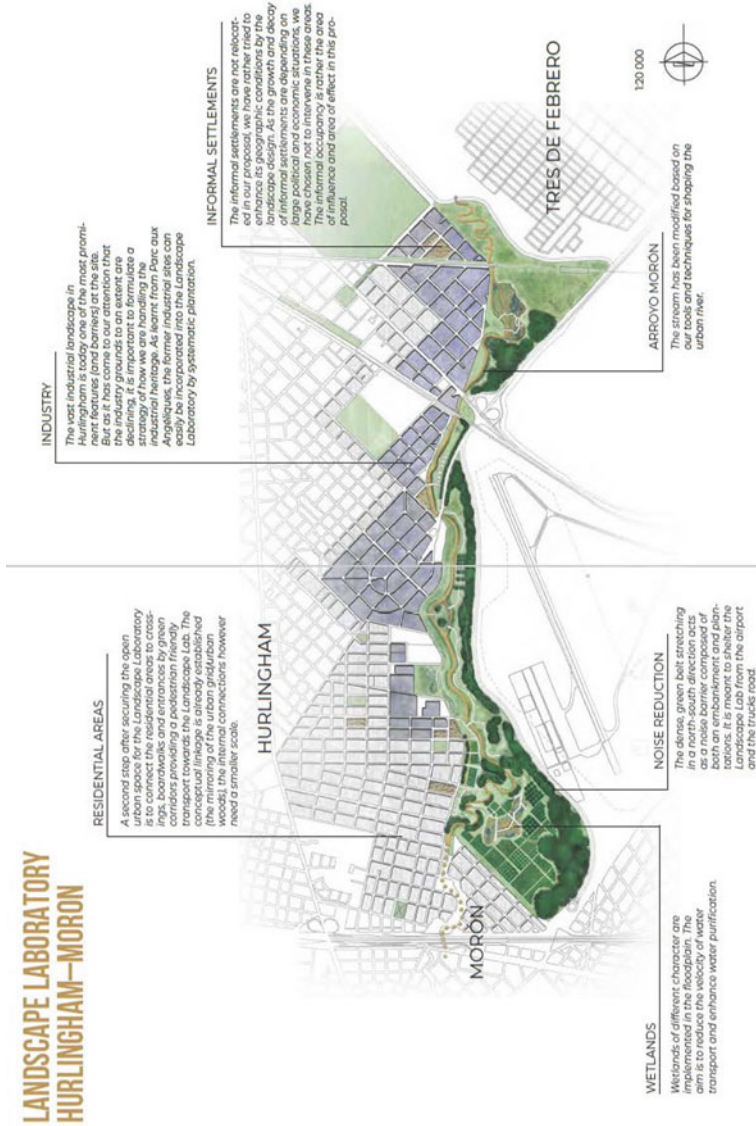
Fig. 11.1 Experimental landscape design for a polluted watercourse in the Metropolitan Area of Buenos Aires. Morón River area. *Drawing* by Dag Lindbom, Nelly Theander

Fig. 11.2 River project with a strategy for socioeconomic transformation. Morón River area. *Drawing* by Sofia Videla, Agustina Cuoco, Valentina Gertiser

urban projects conceived as static architectural forms. Instead, it shapes them as dynamic transformations or journey forms.[14] In this understanding of design, the radical rootedness of a project refers to the etymology of the term "root," deriving from the Latin word "radix," generating the adjective "radical." It distinguishes itself from "radicant," used in botany to discern plants like ivy that grow secondary roots, plants that do not anchor in one particular place but react to whatever conditions arise, in a never-ending process. These plants develop through enrootings (a verb in gerund, dynamic), not based on a single root (a noun, static).

Radical rootedness seems inappropriate for 21st century urban districts subject to various dynamisms, such as climate change-induced water regime alterations and globalization proffered economic and social change. Alternatively, radicant enrootings are considered a powerful framework for adapting to whatever situation arises
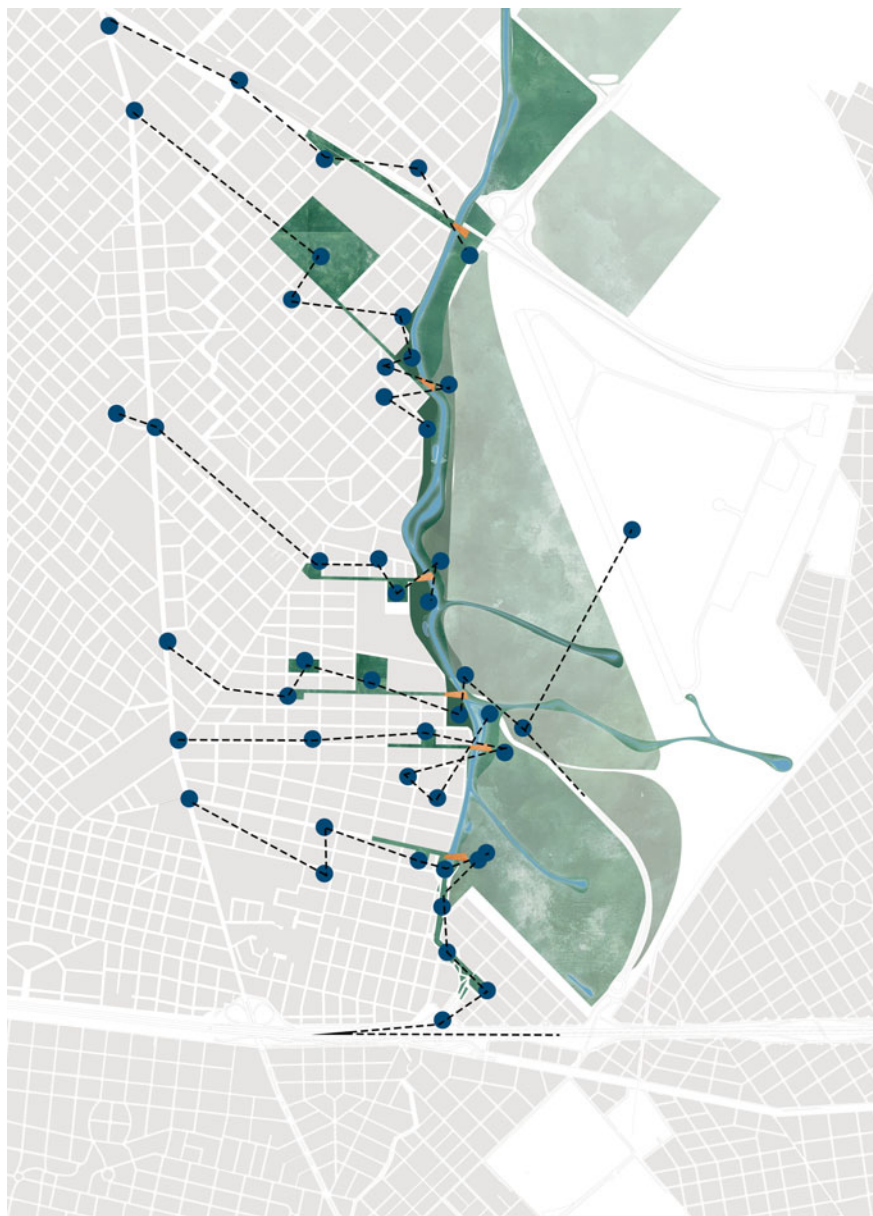
Fig. 11.3 Network of corridors and connectors. Morón River area. *Drawing* by Sol Cabanellas, Manuela Fontenla, Sofia Van Den Heuvel

CATÁLOGO DE INTERVENCIONES

Fig. 11.4 Interventions for Morón River area. *Drawing* by Sol Cabanellas, Manuela Fontenla, Sofia Van Den Heuvel

in the urban transformation process. From this perspective, the actions were simultaneously a product of "…influence and integration, ceasing to be personal, direct, and momentary to position themselves in a system of trans-individual transformation, as the self-transformation, and the transformation of others are equally progressive, one being a consequence of the other."[15] Therefore, the result was an interdependent and polycentric network that embodies a continuous open and evolving process, social articulation and/or environmental remediation. This perspective of a city "in transformation" made it possible to establish, from a local dynamic of active interaction of sub-centralities, functional centralities, and of mobility, new operational functional links. These conditions arise from spatial demands and the potentiality of each place (determined by the people who use it and the environmental conditions) to be recognized, elaborated, and appropriated.

Understanding the transformation process from the correlated synergies revealed allowed for different instances of negotiation between disciplines, with the participating government institutions and with the community, thereby laying the groundwork for activating a strategic planning framework defined in "the intensity of the social relationships they facilitate, the potentiality to create and strengthen group interactions, and the capacity to foster symbolic identification, expression and cultural integration between people and places."[16] This framework is the condition sine qua non for radicant design. The objective implies recognizing the collective and the role of landscape architecture, strategic planning, and urban design in reorganizing and strengthening the re-appropriation of urban-environmental space, as well as the civic awareness of the inhabitants.

Conclusion

Each of the experiments contained in this project illustrated specific ways of dealing with the conflicts studied, as well as ways of modifying their parameters of interpretation and the resulting opportunities for transformation. The need to consider an integrated response, activated from three complementary disciplines, determined ways of interpreting, designing, and assessing the socio-environmental conflicts studied and the opportunities to address them. The complexities that determine interpretations and responses to socio-territorial conflicts were defined as:

- Local conditioning factors—physical/environmental, with water being the main focus—recognizing the economic conditions, technical requirements, and decision-making capacity of local actors involved or considered. In addition, with the particularity/need to involve local actors to ensure continuity, and thereby value, while ensuring adaptive change over time.
- Development of a trans-disciplinary model, from an urban and landscape design base, to strengthen an integrated and evolving strategic framework with actors at different levels of governance.

In terms of comprehensive development strategies, the project promoted ways of coordinating and facilitating actions to develop the local economy. It engaged people living and working in different areas, promoted formal and informal commerce, and contributed to creative and cultural activities. The reevaluation of the components studied allows us to formulate new questions to reconsider the organizational framework, components of the dialogue, and possible transformative outcomes. At the same time, the specific features of the study and associated critical socio-environmental situations raise new questions regarding the implementation and design of trans-disciplinary methods.

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Chapter 12
The Practice of Listening: Community Learning Toward a Social Architecture

Gustavo Diéguez

Abstract Recent years have seen considerable growth in the number of academic experiences that aspire to achieve actual buildings on a true 1:1 scale. Architectural building practices, applied to actual contexts, are slowly beginning to occupy a relevant place in teaching, particularly across South America. In this context, actions that prioritize social and economic inequality are emphasized within academic settings. These experiences are aimed at collective learning practices that confront delicate political and social implications. They demand new skill sets that reformulate timing, develop networks, and create new spaces for social dialogue. Furthermore, they address trust building in relation to different communities and new protocols that introduce added value through collaborative construction. Many questions arise in this process. How to achieve transformational results with the least amount of resources? How to manage building schedules to maintain the continuity of processes that exceed a single academic term? How to achieve the craft of uncertainty alongside the precision that each new project demands?

Recent years have seen considerable growth in the number of academic experiences that aspire to achieve actual buildings on a true 1:1 scale. Architectural building practices applied to actual contexts are slowly beginning to occupy a relevant place in teaching, particularly in South America. Within such a context, actions that prioritize social and economic inequality are being given higher priority within academic settings. These experiences are aimed at collective learning practices and must confront delicate political and social implications. They demand new skill sets that help reformulate timing, develop networks, and create new spaces for social dialogue. Furthermore, they address trust building in relation to different communities, as well as new protocols that introduce added value through collaborative construction. Many

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questions arise in this process. How to achieve transformational results with the least amount of resources? How to manage building schedules to maintain the continuity of processes that exceed a single academic term? How to achieve the craft of uncertainty alongside the precision that each new project demands?

For a long time, there have been objections to learning experiences that cross-academic boundaries. In Argentina, however, we have seen a concerted effort that frames architecture and its professional development within the framework of the licensed procedures of the discipline; its engagement with civil responsibilities is implied by construction. This may be one of the many reasons why the gap between architecture as an artistic discipline operating within the urban landscape and the communities needing improvement has become even greater. Architecture has only appeared as relevant in private commissions for those whose needs are readily met. The profession has consolidated into a homogeneous set of practices that even today has not produced a substantial amount of social recognition.

During the twentieth century, design research projects were taught following a nineteenth-century tradition aligned with the idea of authorship. Traditional versions of academic training in design research courses have, for the most part, stressed the development of abilities as a by-product of the author's concept. This concept does not in itself present an expression isolated from the context of its activity, nor the needs of its stakeholders. Its founding principles establish a close relationship between the works themselves and the author's artistic notions and subjectivity. Thus, the architectural project as an author's prerogative has played a major role in training disciplines like architecture within limited discursive bounds. Architecture has placed itself on opposing sides associated with both the arts and technology. Thanks to their emphasis on the objective knowledge of the profession's various technical and constructive aspects, polytechnic schools have tried to neutralize this problem. Yet, it has simply been superficial coverage for the dialectics of objectification inherent in design.

Throughout the twentieth century, the conflict between the notion of the architect as an author and as a socially responsible player has only become more pronounced. It has allowed for the effective incorporation of various fields of design into different areas of the labor market. The identity of architecture as a liberal profession presupposes the definition of practices that place architectural training within the bounds of individual skills. These abilities are deployed through specific knowledge of the means of production that each action requires. Even if this statement appears obvious, it must be emphasized. Technical ability, a necessary skill for architects, does not consider the social skills necessary in certain design processes. To develop social skills, one should explore a technical field linked to collaborative formats that do not end with group work. It is worth noting that academic spaces have not been provided with the necessary tools to develop the collective intelligence and collaborative attitude necessary in professional architectural practice.

This chapter proposes a conceptual framework to establish a critique of how design research projects have developed a means to interpret a general approach to production in the public sphere. In terms of developing skills linking the production process of architectural forms, project management, and construction, there appears

to be an interesting point of discussion regarding the role of experimentation. Taking a step backward may help characterize the problem as a function of the various situations in which these kinds of practices exist. It can also be useful to look at the contexts in which these practices occur, how they are taught, and their challenges. A critical question is as follows: *Is there a place for radical experimentation in academic courses within a context of social urgency and an economy of resources?*

There is a tension between experimentation in design and the needs of construction. Experimentation uses a process of trial and error as one of its main tools. In contrast, the application of architectural pieces in the context of social and economic needs does not allow for errors. In such processes, which may be prolonged in terms of time, there is a need to differentiate between experience and experimentation. The newness of such practices, and the lack of tradition and precedents, places them into the field of experimentation because expected results come with a high degree of uncertainty—both in terms of building social bonds and the production of social identities and economic sustainability. In this sense, these practices may be considered experimental—and this is where the risks tend to lie.

In terms of experience, while academic exercises are based on simulated scenarios, this is compensated by working with real data, a specific client community, and a particular territory. This is important because it allows engagement with all of a project's determining factors, conditions, and the real possibility of its materialization. In this sense, the goal is coexistence of the academic and the real whose end result is collective construction. These practices, therefore, can be considered architectural experiences that have the capacity to transform and develop new points of view. In addition, they emotionally affect the lives of those involved in the collaborative effort.

This otherness and complementarity provide a wide field to be explored. It requires reassessing curricular and extracurricular evaluation, along with grading when considering the daily follow-ups of a collective construction workshop. The difference between coursework and these extracurricular activities must be taken into consideration and clearly outlined in terms of the different objectives of each area. At the same time, students must familiarize themselves with project management and ways of procuring material resources, requirements that are usually beyond their capabilities.

These issues raise various questions, such as: How to bring about the most transformational results with the least amount of resources? How to manage building schedules to maintain the continuity of processes that exceed the academic term? How to reproduce the craft of uncertainty with the precision that each new project demands? These kinds of projects are artisanal in essence; they cannot be subjected to conventional mechanisms, as each of these approaches deserves to be thought out from scratch every time. They cannot be understood as mass-produced devices because each social bond, material procurement, and financial resource needs to be developed and brought about in a different, highly specific way. The only set resource that can bring a methodological response to each of these processes is the act of listening (Fig. 12.1).

Fig. 12.1 Parque Educativo La Carcova. The practice of listening. *Photo* Gustavo Diéguez

Conversation, listening, and interpretation are distinct processes that operate as strategies for the design and production of trust and affection. The development of these projects includes an initial stage of public interviews and conversations that are framed as a knowledge gathering exercise which attempts a first approach to the topic and the problems to be solved, along with an understanding of possible limitations and projections. After this, the subsequent exercise in collective thinking consists of listening to conversations with the project's "client community." This helps develop a plan that includes the community's needs, infrastructure, other physical requirements, and the possibility of building in stages. It unfolds through different paths for growth and the possibility of imagining and transforming the space to achieve greater impact in the community.

It is essential that the project's "client community" joins the process and become part of the curricular coursework. The aim is for the architectural work to be fully understood while simultaneously favoring the conditions that make a collective learning process possible. In this way, trust building is reinforced, and the possibility of expectations being let down is staved as communication becomes more natural, regular, and fluent over time. Each stage in the process is concluded with a public event, including a presentation of everything that has been achieved so far. Members of the client community can voice their criticisms, opinions, and preferences. Everything that has been produced thus far then goes through a process of integrating all the ideas highlighted by a collective exercise that outlines the needs to be addressed and opens the way to the project's design stage. The development of a common roadmap allows for several different design projects to emerge from a list of agreed-upon necessities. These projects interpret and display different scenarios and are themselves the product of divergent imaginations.

Fig. 12.2 Parque Educativo La Carcova.   Collective construction workshop. *Photo* Gustavo Diéguez

This plan, which includes coursework and public presentations with the client community, is repeated at every stage of the process. This creates a rhythm for the work that helps maintain all of the participating actors' high expectations (Fig. 12.2). The designs presented by the students also go through a process of evaluation and selection. This allows for the selection of designs that meet the architectural requirements and can be realistically built during community construction workshops. Costs must also remain within the bounds of the available budget.

The following case study is part of a long-term project with several stages that included a series of dialogues with municipal authorities, the company that owns the land, the organizations and the institutions financing the project, and, especially, a network of academic units and architecture schools working on the project's organization and management while maintaining constant contact with the client community.[1] This includes the accumulation and sedimentation of experiences developed in different academic courses working with various actors and players. An example of these collaborations would be a sequence produced by a couple of courses at the same school, such as the Project Experimentation Workshop and the Technological Experimentation Laboratory, which link design research with technological expertise. From the start, these courses propose an equilibrium between the possibility of producing alternative approaches to a single problem, including consultations

Fig. 12.3 Parque Educativo La Carcova. A wooden workshop

with the client community and their respective academic evaluations, and the direct materialization on land of what the university has produced.

These collective construction workshops form the part of the project in which students come in contact with materials and the means to transform them, verifying that their drawings can become a reality (Fig. 12.3). This moment comes after preliminary sessions and exercises, consisting mainly of setting up the social conditions so that each participant can take on a specific role with an appreciable level of responsibility, identity, and emotional involvement in the work at hand and its results. This requires including members of the client community in the building process, as well as extending the act of listening to every phase of the project. Such an extended listening exercise makes it possible for all tasks—their improvement, the mutual process of learning through shared experiences, the use of tools and materials, and the challenges that inevitably appear—to be enriched and become part of the collaborative act of building (Fig. 12.4).

It is often the case that works produced without a connection to the community do not develop an emotional attachment, sense of belonging, and purpose. To a greater extent, public works that reach communities with standardized solutions and without the necessary contact with end users tend to fall into disrepair and prematurely degrade. The academic experience adds another layer of learning related to the need for an understanding of architectural practice as a discipline of logistics, a function of project management, the transportation of people and materials, and the negotiations

Fig. 12.4 Parque Educativo La Carcova. A wooden workshop

for the necessary agreements (Fig. 12.5). On the other hand, there is an attempt to bring back the ancestral concept of collective building as a mystical and inspiring aspect of the energy derived from social bonds. This is difficult to achieve in other human endeavors, but it comes through pursuing a common goal, the democratization of authorship, and sharing the project's credit.

What does placing the act of listening as such an important tool for the practice of architecture and architectural education mean?[2] In Argentina, architecture has been separated from social interest and recognition for quite some time. One reason for this could be that the profession has not capitalized on its role of bringing together productive forces, social needs, and the availability of materials in times in which economic crises would cyclically emerge. Architects have collaborated to make architecture an autonomous discipline which maintains its ties to a conservative matrix that acts exclusively within the bounds of top-down structures.

For years, and as an instrument of class structure, architecture has upheld its distance from other social and economic organization forms. Therefore, the discipline has distanced itself from the possibility of its being understood as a tool for social change. The development of architecture's ability to mediate can only come about if it recognizes its ties to other types of knowledge. It must connect to the collective production of knowledge without abandoning its position in the technical field or production of forms. It seems that the political component determines how these decisions are made. Thus, the act of listening is a political act because it implies

Fig. 12.5 Parque Educativo La Carcova. Montage day

the beginning of a practice. Thus, it is based on horizontal bonds and maintaining a dialogue that becomes a material object linked to a system of decisions.

Against all odds, the idea of practicing architecture from a political stance implies that it should assume a more significant role in developing management techniques. These efforts take part in the social dynamics of organizations and human groups to improve their living conditions. Taken as a whole, such challenges lead to the more profound and socially meaningful aspects of this work. One could meditate on the possibility of constructing social identities by mediating a kind of architecture that can significantly contribute to the integration of communities. Through the repetition of these types of projects, it is expected that architecture will become a popular discipline to the extent that it can mediate effects and become an agent of positive change in favor of community identity. Throughout the history of South American cities, only a few isolated examples of success in this field exist; the great historical debt resides in the lack of popularity of this tool for social cohesion.

Thus, the search for architectural production from the point of view of a social imagination for each new project opens up a whole new field of study. This seems paradoxical because imagination is a means of production akin to the individual. The idea of individual authorship is so fixed that it seems like the common-sense solution of contemporary architectural practice. A proposal that confidently places its bets on constructing a collective imagination constitutes a challenge to its methodologies, dynamics, and ways of integrating skills. This proposition can also operate as

Fig. 12.6   Parque Educativo La Carcova. Montage day

a cultural shift and a change in political thought, as new types of agreements and decision-making processes need to be put into place. This demands that the experience continues providing architectural resources. Other disciplines, such as the social sciences, will bring their own ideas and the ability to ask many more questions in becoming part of the joint effort of construction.[3]

It must also be noted that academic activity in deprived areas, through the construction of better civic facilities and the improvement of living spaces, should come with a new idea of architecture (Fig. 12.6). An architectural process that contains a political dimension, while aspiring to an aesthetic outcome, entails a high level of expectations that should be matched. As an activity in constant evaluation, it cannot exclude itself from a larger network that includes the university, with its policies of open access and transfer of resources into surrounding territories, as well as the governmental roles empowered to act on those territories. The fundamental premise of this research is based on a notion of architecture as a social good and a cultural product of the community that generates it. This point of view serves to bring architecture into focus as a discipline that, through its capabilities, has the power to construct identities, favoring the implementation of a human right that would guarantee all citizens access to appropriate housing and the possibility of developing a full life.

Endnotes

1. The project for Parque Educativo La Carcova (La Carcova Educational Park, Buenos Aires, Argentina) can be defined as a collaborative work in progress, extended in time, based on a network of universities and associated with a common goal in a specific territory with numerous unmet needs. This network for collaborative work consists of the following institutions: Biblioteca Popular La Carcova, Taller de Experimentación Proyectual/TEP and Laboratorio de Experimentación Tecnológica /LET (IA-UNSAM, Argentina), Taller a77 (FADU-UBA, Argentina), Cátedra Walter Gropius (FADU,UBA-DAAD), Matéricos Periféricos (FAPyD-Universidad Nacional de Rosario, Argentina), Laboratorio de Dispositivos (FAUD-Universidad Nacional de Córdoba, Argentina), SuE and IRGE (University of Stuttgart, Germany); with financial support from DAAD (the German academic exchange service), the STO Foundation and the German NGO Aktion Palca.
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3. Diego Sztulwark. *La ofensiva sensible. Neoliberalismo, populismo y el reverso de lo político.* Caja Negra, 2019. According to Sztulwark, it is necessary to think of inclusion--in terms of consumption and rights--as a method and a premise, but not as a model and purpose. It is, perhaps, in the plebeian moment, described by Sztulwark, when the notion of "us" could be constituted and deployed.

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Chapter 13
The Limits of Urban Design in Slum Upgrading Process: The Case of Parque Fernanda I, São Paulo, Brazil

Solange Carvalho

Abstract This chapter discusses urban design in slum upgrading programs in Brazil. Our hypothesis is that the fragility of this process lies in the notion that the *logic of the slums*, operating therein, would be interrupted by State-led projects and urban design. Thus, the belief that this interruption would happen leads to public policies that ignore local dynamics. After urban upgrades, favelas would be included under public management and subject to the rules of the State logic. However, favelas were originally built on the margins of the State and the formal market, chiefly through the collective efforts of their residents. In addition to particular physical features, this means that favelas developed their own societal organization through local stakeholders and forces that collectively construct what we call the *logic of the slums*. The case study of Parque Fernanda I in São Paulo, which was upgraded in the 2010s to address sanitation and environmental risks, shows the limits of urban design and its permanent tension with urban management. New open spaces, whose public use is regulated by law, are currently under threat of reoccupation due to a lack of collective appropriation, as well as conflicts of coexistence and interest. We believe the role of local stakeholders, who are active in appropriation of the urban environment and continue to imprint the *logic of the slums* after the upgrading process, cannot be underestimated. As such, we conclude that the issues presented herein must be addressed to improve slum upgrading programs that use urban design as their primary tool.

Keywords Favelas · Urban design · Upgrading · Collective appropriation · São Paulo

This chapter discusses the slum upgrading process from a critical and building perspective based on recent Brazilian experiences. Our focus is the urban design project, which since the 1990s has been used by public programs in the Global South as a tool to develop improvement actions in these territories. Within the logic of slum

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upgrading programs, urban design must address the view of favelas as urban informality and precariousness. These qualities are considered to be outside of adequate standards and, therefore, need to be reformulated. Several authors[1] have contested the view of urban informality as a sign of precariousness, proposing a broader, more positive redefinition of informal settlements that takes into account the complexity and diversity of these territories in contemporary cities. Based on this reconceptualization, and looking at the issue from the perspective of architecture and urbanism, we seek to contribute to redefining urban design in slums.

This chapter discusses research completed in 2020 focused on designing and implementing urban projects within the context of slum upgrading processes in Brazil. The essay reviews the programs, projects, and results of urban upgrading of three favelas in São Paulo and Rio de Janeiro. It presents an analysis of collective spaces resulting from the slum upgrading process of Parque Fernanda I (City of São Paulo), where the permanent tension between urban design and territorial management was quite evident, as well as some of the challenges faced by the slum upgrading process. Based on this analysis, this chapter discusses the conflicts between the *regulatory logic of the State*—which governs programs and is intended to be the operating logic of slum upgrading—and the local dynamics and stakeholders that have built and given identity to the slums, or the *logic of the slums* (Table 13.1).

The current context is critical. Brazil has seen a reduction in investments in slum upgrading. Meanwhile, the global Covid-19 pandemic has disproportionately affected slum populations, a result of urban and social inequalities that are spatially imprinted on most cities in the Global South. It is noteworthy that improvements in upgraded slums have led to improved health and hygiene conditions in urban environments including Parque Fernanda I. This extends to a better quality of life, while indirectly increasing social benefits for their inhabitants. As such, we believe that it is a timely moment to reflect and contribute–from the perspective of architecture and urban design–to the adjustments that must be made to public policies. The criticisms and suggestions presented herein aim to reaffirm the importance of these public policies, as well as redefine the practices, actions, and attitudes perpetuated in the process.

Parque Fernanda I: The Logic of the Slums and the Regulatory Logic of the State

Slums were built through the collective efforts of the residents themselves, a process developed on the sidelines of the State and the formal market.[2] This not only determined the particular physical traits of these settlements, but also brought some advantages and a unique social organization with local stakeholders and forces applying their own logic to these territories (which we define as the *logic of the slums*).[3,4] Within this logic, an empty area is not a public space and its occupation can be disputed, apart from a few spaces consecrated by popular use, such as soccer fields.

Table 13.1 Data on the Parque Fernanda I slum and the slum upgrading process

Slum	Area	Dwellings	Inhabitants	Location	Slum upgrading program	Sponsor	Intervention type
Parque Fernanda I	7.44 ha	807	2545	São Paulo/SP	Project: PAT-PROSANEAR Program (2008–2008)	Municipality/Federal financing	Environmental sanitation and recovery program
					Construction: PAC/PPI (2008–2013)		

Credits The author

The history of slums reveals a progressive occupation of empty areas that accommodate particular needs. The pressure to occupy more spaces is always present in slums, whether for the possibility of expanding one's own house, as a way to complement income with rent, or for speculative purposes, as shown by Carvalho and Benetti.[5,6] when the government invests in the slum. These processes seem to be ignored in the post-slum upgrading phase. Residents' associations have already assumed a leading role in negotiating boundaries, issuing building permits and mediating conflicts between neighbors. Nisida shows that, at present, self-regulation is the ruling system in several slums, structured by a complex network of stakeholders, principles, and rules that runs completely on the margins of public management.[7] The complexity of such practices, according to the author, is not assimilated by the traditional tools of urban design that underlie the regulatory logic of the State. As public management is intermittent in slums and its standards are not recognized by the local population, self-regulation remains after the State has carried out slum upgrading.

On the other hand, slum upgrading policies are established to implement the State's regulatory logic in the favelas. It is understood that the incorporation of slums into the public management system would take place under the same principles that govern formal cities, as a new urban paradigm in the slums. Our hypothesis posits that the weakness of these public policies lies in ignoring local dynamics in the slum upgrading process. The regulatory logic of the State, through urban design implementation and public management after upgrading, would interrupt the logic of the favelas that operate in these territories. This hypothesis was verified in our case study of Parque Fernanda I, a focus of our doctoral research illustrated herein.

The Parque Fernanda I slum was formed in the 1970s along a tributary of the Pirajussara Stream, with its banks completely occupied by housing. In 2006, at the beginning of the slum upgrading project, the main problems in the slum were related to sanitation and the environment, with open sewage and high levels of garbage that caused foul smells and high rates of contamination and illness. The occupied banks of the stream were declared at risk of flood and landslide; the population that lived there needed to be removed.

Upgraded in 2010, the Parque Fernanda I slum was the target of a project developed within the guidelines of the PAT-PROSANEAR Program (Low-Income Sanitation Technical Assistance Project). Financed by the World Bank, its focus was to develop integrated actions to build basic sanitation, eliminate environmental risks, and resettle populations facing socioenvironmental vulnerability.[8] The slum upgrading process relied on a participatory methodology and included solutions for this population, such as the transfer of families facing socioenvironmental vulnerability to new housing units built within the same slum (Fig. 13.1, next to Section "Green Path: Different Levels of Appropriation for Each Solution"). Additionally, a supplementary road system was built that could guarantee permeability and sanitation networks for the entire slum. The banks of the stream—formerly a risk area—were completely vacated. The stream was channeled and covered (buffered) throughout its entire length so that today it is no longer visible in the landscape. A "Green Path" was implemented along the stream consisting of new collective spaces and paths built to
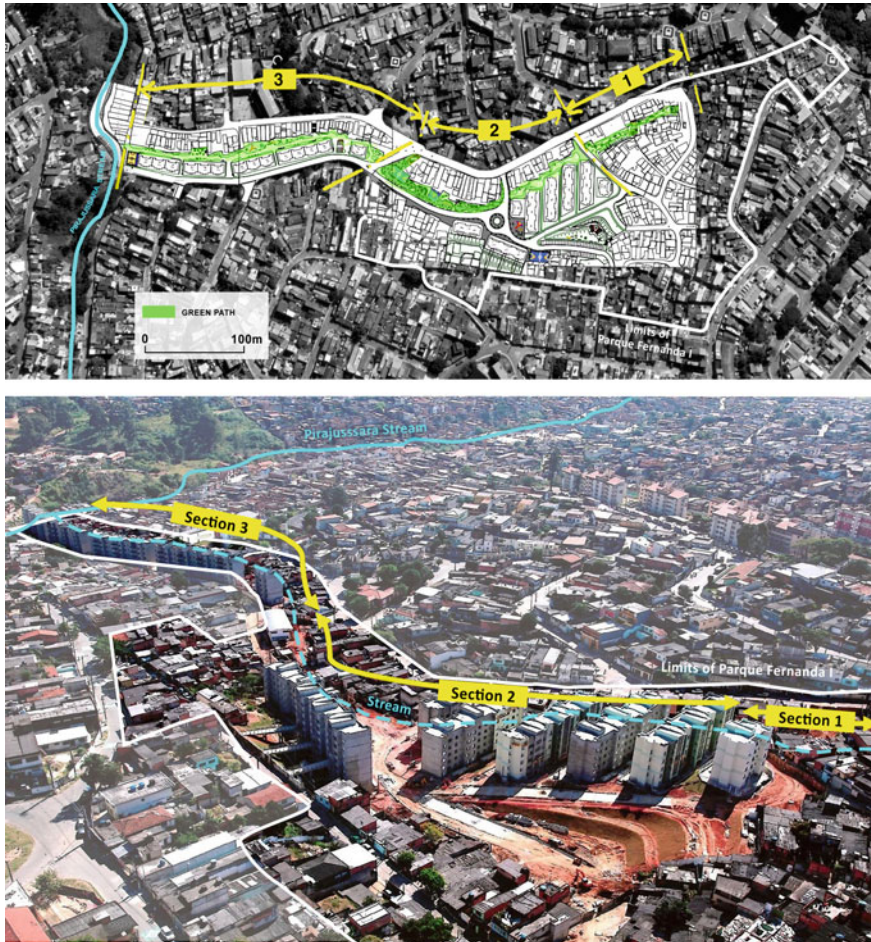
Fig. 13.1 Three sections of the Green Path along the Pirajussara Stream. Upper image: diagram drawn on a map. Lower image: overlaid on an aerial view. *Montage* Solange Carvalho

guarantee their public use and avoid the reoccupation of the channeled underground stream line.[9] Following the slum upgrading process, Parque Fernanda I gained a new status within the informal settlements of the Municipality of São Paulo. Its classification changed from a *slum* to an *urbanized district*.

In addition to urban design, the public nature of the Parque Fernanda I Green Path is also supported by legislation such as the "No-Edification Strip" (or FNA in the Brazilian technical acronym). Within the regulatory logic of the State, this legislation designates an area must be free of construction to protect natural resources, infrastructure supply lines, and other resources. We affirm that the slum upgrading project has successfully eliminated environmental risk, as shown by official data on the new basic sanitation system that was implemented. However, were the project

and legislation sufficient in maintaining the public nature of the Green Path? Have the State's urban management policies managed to address the logic of the slums in these new collective spaces?

Green Path: Different Levels of Appropriation for Each Solution

The Green Path is the object of our analysis. We have divided the Path into three sections (Fig. 13.1), divided not according to morphology, but rather by the different ways residents have appropriated the new infrastructure after construction was completed.

As a methodology, we used Grosbaum's proposed dynamics for the use of public spaces,[10] and Ginzburg's deductive method of signs, traces, and tracks that can be visually perceived and even quantified.[11] However, what matters here is not the numerical factor, but the connotations of social relationships that interfere with physical spaces. This represents the real dynamics of transformation that are characteristic of slums, presenting as many positive aspects as problematic ones in terms of urban control.[12]

The conversations and testimonies reported below took place during our visit to Parque Fernanda I on a sunny winter afternoon in 2017. David, a City Hall architect with extensive experience in slum upgrading programs, shows us the area six years after the improvements were complete.[13] We started our visit with Section 1 of the Green Path, which does not correspond to the original design.[14] During construction, projects undergo changes that are not always devised by their authors. This was the case of Parque Fernanda I, and the final result may not reflect the urban design project's original concept.[15] The housing units and the carriageway planned for that location were not completed. The houses that had been built on the banks of the stream had been removed. A pedestrian walkway and staircase connecting the alleys of the slum were installed instead. The back walls of the houses served as the facades facing this pedestrian path (Fig. 13.2). The Green Path in this section resembles a passageway without *effective eyes on the street,* ever watchful of what is going on. Some rare accessways to the houses opposite seem to have been built after the fact.[16]

The construction projects, "for sale" signs, and building materials lining Section 1 of the Green Path show that the housing expansion and speculative behavior typical of the logic of the slums, as mentioned above, occur here. We emphasize that this is not necessarily a negative trait since the walkway does not appear to have been incorporated into the neighborhood's daily life. New accessways to housing in this Section 1 of the Green Path could enhance appropriation of the street as a public living environment. This is an aspect of the logic of the slums that, as we pointed out, could positively complement the slum upgrading process. However, we offer a warning: if construction continues indefinitely over the pedestrian walkway, its original function—i.e., that of preserving the FNA buffered stream—will be at

Fig. 13.2 Section 1 of the Green Path. Pedestrian walkway over the stream bed, lined by the back walls of houses. *Photo* Solange Carvalho

risk. We would venture to say that, without permanent urban control and without the transformation of the current framework of appropriation in Section 1, this path will soon be narrowed and the FNA will be reoccupied. This has happened in other slums.

Our analysis of Section 1 of the Green Path makes us wonder: Should we oppose the logic of the slums and prevent such practices from occurring? Should we incorporate its positive aspects into the logic of the design and regulation of these spaces? It is natural and desirable for new accessways to open onto this planned street, especially as it is flanked by walls. Places that remain idle will be occupied by unforeseen appropriations that may endanger public use. So, why not take into account this aspect of the logic of the slums and indicate *receptor patches*, as suggested by Gouverneur, as areas for occupation post-construction? The urban design project could be an instrument to articulate a new urban pact with the local population, creating shared rules and procedures for the targeted occupation of receptor spots. Engaging stakeholders in the process—i.e., local residents alongside technical assistance entities and the government—could create greater potential for control, as well as respect for the project and the upgraded environment to establish a new shared logic.

Section 2 of the Green Path has quite a different ambience from that of the previous section. Here, a path with trees that have grown tall. This is an indicator of the residents' care for the place. Green area upkeep by public authorities is minimal or nonexistent in slums. In most cases, it is the residents' stewardship of the vegetation that minimally guarantees the growth of trees (Fig. 13.3).

Proud of the results of Section 2 of the Green Path, David tells us that the project's implementation guidelines seem to have been crucial to ensure movement and the collective appropriation of this section. Although they were built in the homogeneous,

Fig. 13.3 Section 2. Very green and well-maintained. New accesses to the Green Path are being opened. On the right, the fences of the new housing buildings. *Photo* Solange Carvalho

sequential pattern characteristic of social housing in Brazil, the six new buildings do not configure an enclave.[17] To guarantee this, the design intentionally included alleys between buildings and an individualized enclosure (Fig. 13.4). Changes to the fences may happen in the future which would change the public nature of these alleys. However, any future privatization of these spaces is made more difficult by
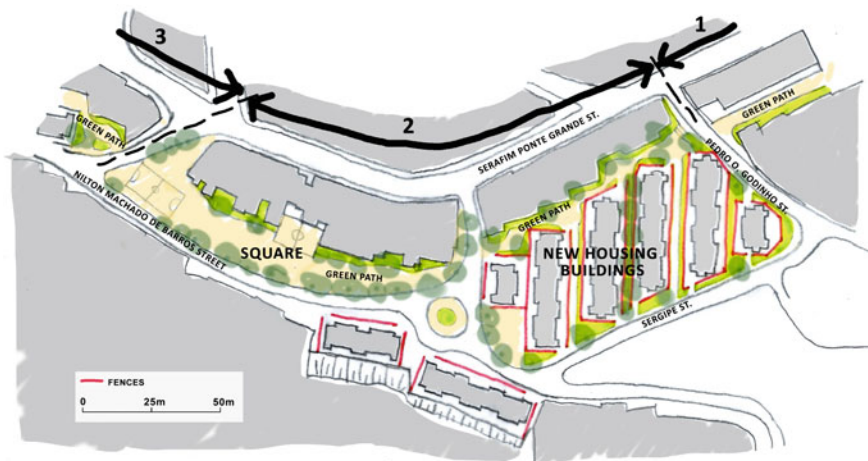
Fig. 13.4 Schematic plan highlighting the individualized fences (in red) of the new housing buildings to avoid the formation of an enclave, granting access to both Sergipe Street and the Green Path. *Drawing* Solange Carvalho

Fig. 13.5 Square with sports and leisure equipment. *Photo* Solange Carvalho

the high visibility of its surroundings. It also would depend on consensus between (and investments from) residents in the buildings.

Another important part of the original design was the adoption of collective spaces outside the new housing buildings. These encourage all residents to make use of the new collective areas built in the slum when seeking leisure or playing sports. A public square was built in the vicinity of the housing buildings (Figs. 13.4 and 13.5). It is large in scale by slum standards, with sports and leisure equipment for all ages. The square's liveliness as a collective space is evident: boys and girls of different ages play volleyball in the multipurpose courts, parents walk with their children, and the playground, despite its poor maintenance, is being used. It is the urban animus, density, and multiplicity of slums that we see shared in this collective space. Its atmosphere harkens back to a small-town square on a peaceful evening. The large scale of the square and its placement, central to the slum and its surroundings, was an apt and adequate decision. We consider both aspects as key design elements that contributed to the collective use of the space and prevented its reoccupation.

Consolidated social use is one of the factors that can help ensure the permanence of work done in slums. This can be reinforced by effectively engaging users in the development of designed spaces. This was precisely the methodology employed in the Parque Fernanda I urban design project.[18] The fact that the completed square was very similar to the design achieved during participatory planning was pointed out by residents as an important reason for their satisfaction.[19] It is not enough to design and build certain solutions. One must build more than just physical environments, but rather, build alliances between residents and potential users of each location. Residents will be invested in defending free collective areas against unwanted occupation in the future.

We then arrive at the third and final section of the Green Path, a space wedged between the back of the slum houses. I noticed disappointment in the eyes of our guide, who does not recognize any of the collective spaces that were built there during the slum upgrading process. Play equipment has completely disappeared from the playgrounds. The sounds of welds and saws announce the construction, at that very moment, of the enclosure that will seal off this collective space. Our presence causes embarrassment in the residents, who look at us as if they were caught in the act. Some approach us to who is watching them. The explanations then begin: "This space? It's not used except by *the boys* that linger around here, you know?". According to residents, the occupation of this area as a parking lot is necessary to prevent it from being appropriated for crime.[20]

On the official side, our guide David, an architect employed by the city government who participated in the upgrading project and construction works, begins an attempt at negotiation. "This area cannot be occupied, it has to remain public because a stream flows through here. After all, it's an FNA! Besides, this area *was* used! A playground was built here!" Resident Luzia immediately argues: "Oh, dear... There's no more stream here! There was one, but now there isn't one anymore! Where's the stream?" (Fig. 13.6).

This debate, which took place between municipal government technicians and residents of the housing units, is a fair reflection of the conflicts between the regulatory logic of the State and the logic of the slums in the urban upgrading process. David warns the residents that there are official procedures to demand measures from public authorities, such as requesting intervention from the local administration. This is a space for public use and there are rules that govern it. We noted that it was the environmental legislation that determined such rules, requiring that areas built over buffered streams are FNA and public use, but this is no longer recognized by the slum. The residents, for their part, contend that they have already complained and officially requested the enclosure of this area. Nothing has been done, not even to prevent criminals from appropriating the area. But they suddenly realize that right there, in front of them, is a technician from City Hall! So, why not settle the matter right away? "If you're from City Hall, can't you just authorize the enclosure?" The complexity of institutional management is called into question by the mediation

Fig. 13.6 Section 3 in 2008, with the stream before the upgrading (left), in 2014 (center), with the Green Path and in 2020 (right), with enclosed parking replacing the playgrounds. *Montages* Solange Carvalho

Fig. 13.7 Section 3 in 2017—The playground of the Green Path was in the process of being replaced by enclosed parking. *Photo* Solange Carvalho

practiced within the logic of the slums, where everything is more agile than in the official sphere. How can one make ordinary citizens understand this issue, despite the official being from City Hall, management over that area is the responsibility of another sector? Carlos (Fig. 13.7), a boy who's cycling around very slowly while listening to the debate, complains softly to me, almost completely muffled by the voice of the adults, that the building residents destroyed his playground.

What we see here, in essence, is a debate between interlocutors who do not seem to understand each other and are not making themselves heard. In each of these different realities and logics, there are certainties about the complexity of collective spaces and the slum upgrading process.

Conclusions: What Have We Learned from Parque Fernanda I?

We have presented examples of infrastructure built in Parque Fernanda I by the government, where one can observe the fragility of the management of collective spaces in upgraded slums. In the analysis of the Green Path, we showed different urban design solutions for collective spaces. These spaces were built to ensure the protection of a No-Edification Strip (FNA) along the banks of a stream that were fully occupied by houses before the slum upgrading process.

The small-scale collective spaces of the Green Path, placed between walls or at the back of homes, are under greater pressure for occupation than the square which has intense collective use. Sections with less visibility are being reoccupied by residents

every day, either in response to unwanted appropriations by organized crime or with the goal of transforming the backs of houses into new entrances. These practices, typical of the logic of the slums, continue even after urban upgrading, and therefore, need to be considered in the process. New occupations will inevitably occur at some point. We affirm that the praxis of urban design in slums needs to be articulated with the logic of the slums if it seeks to become a document that effectively guides future occupation and maintenance of the collective spaces built. This could promote a balance between private demand and the needs of the common good. By doing so, we would be resignifying urban design as an instrument that contributes to the creation of a new urban pact, one that is respected and effectively regulates upgraded slums within a new shared logic.

The square, which is built on a large scale–visible, accessible, and integrated with its surroundings–is an example of appropriation by different groups. The FNA is not preserved because it is above the stream; it was buffered and effectively disappeared from the landscape. Instead, the space is preserved because the square is now recognized as a space for collective use. Its occupation for private purposes will certainly face resistance from users. The design methodology, which involved residents in the construction of the project guidelines, also seems to have influenced the appropriation of the square. The design of the square, discussed via participatory planning, was very similar to what was actually built, leading to resident satisfaction. The square's users have become stakeholders that defend this free collective-use area and protect it against unwanted occupation. This is a good example of a collective space that needs to be parameterized so it can be replicated in other slum upgrading projects. It is an example in terms of methodology, scale, relationship with surroundings, density, proximity to public roads with public transportation, and other qualities.

However, we note that this built urban design project will not be useful without the continuous support of public management. Management must be based on rules created alongside stakeholders who imprint the logic of the slums on to the territory. Urban transformations in slums depend not only on the physical environment, but also on continuous management and a shared urban pact. As shown here, the regulatory logic of the State did not automatically start operating in these territories after the slum upgrading processes. By not recognizing or ignoring the fact that the logic of the slums persists, the urban design project and public management may be putting at risk the sustainability of its investments in urban and environmental improvements. These investments cannot be protected merely by legislation, or by simply changing the official status of Parque Fernanda I from *slum* to *urbanized district*.

Endnotes

1. See: Vyjayanthi Rao, "Slum as a Theory: Mega-Cities and Urban Models" in The SAGE Handbook of Architectural Theory, eds. C. Greig Crysler, Stephen Cairns & Hilde Heynen (London: SAGE Publications Ltd, 2012), 671–686; Ananya Roy, "Urban Informality: Toward an Epistemology of Planning", Journal of the American Planning Association 71, no. 2 (Spring 2005): 147–158; Jaílson Silva (Org.), O que é Favela, afinal? (What is Favela, after all?) (Rio de Janeiro: Observatório de Favelas do Rio de Janeiro, 2009).

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3. See Boaventura Souza Santos, "Notas sobre a História Jurídico-Social de Pasárgada" ("Notes on the Legal-Social History of Pasárgada") in Sociologia e Direito: textos básicos de sociologia jurídica, eds. Claudio Souto and Joaquim Falcão (São Paulo: Pioneira, 1980), 109–117;, Luiz Antônio Machado da Silva, "A Vida Politica Na Favela" ("Political Life in the Favela"), Cadernos Brasileiros, no. 41 (v. 1, 2011): 35–47).

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6. Pablo Benetti, "Costuras urbanas na Avenida Central do Morro do Alemão" ("Urban seams on Central Avenue in the favela Morro do Alemão") in Praça pr'Alemão ter: o germinar de uma praça verde no Morro do Alemão, eds. Pablo Benetti and Solange Carvalho (Rio de Janeiro: PROURB-Instituto Raízes em Movimento, 2017), 89–101.

7 Vitor Nisida, "Desafios da regulação urbanística no território das favelas" ("Challenges of urban regulation in the territory of the Favelas"), (Ph.D. diss., University of São Paulo School of Architecture and Urban Design, São Paulo, 2017).

8. Project developed from 2006 to 2008 by the GTA/GCA Consortium, formed by the Technical Support Group (GTA) and engineering company GCA Consultores Associados, both based in the city of São Paulo. This same project was then carried out between 2008 and 2013 using resources from the municipal government, complemented by resources from agreements with the State Government (CDHU) and federal-level resources from the

PAC/PPI/Integrated Sanitation (Growth Acceleration Program/Priority Investment Project), namely its Slum Interventions—Integrated Sanitation component, the latter carried out by the National Secretariat for Environmental Sanitation.

9. Name given by the urban design project to this public use strip built on top of the stream.

10. Márcia Grosbaum, "O espaço público no processo de urbanização de favelas" ("Public space in the slum upgrading process"), (Ph.D. diss., University of São Paulo School of Architecture and Urban Design, São Paulo, 2012).

11. Carlo Ginzburg. "Signes, traces, pistes: Racines d'un paradigme de I'indice" ("Signs, traces, tracks: Roots of an index paradigm"), *Le Débat*, v. 6, no. 6, 1980: 3–44.

12. See: Paola J. Berenstein, "Estética da ginga: a arquitetura das favelas através da obra de Hélio Oiticica" ("Aesthetics of ginga: favela architecture through the work of Hélio Oiticica"), (Rio de Janeiro: Casa da palavra, 2001); Jaílson Silva, "As periferias roubam a cena cultural carioca" ("Peripheral communities steal the cultural scene in Rio"). in *De Baixo para Cim*a, eds. Gabriela Agustini & Eliane Costa (Rio de Janeiro: Aeroplano, 2014): 55–78; Eduardo Pizarro, "Interstícios e Interfaces Urbanos como Oportunidades Latentes: o caso de Paraisópolis" ("Urban interstices and interfaces as latent opportunities: The case of Paraisópolis Favela, São Paulo"), (Ph.D. thes., University of São Paulo School of Architecture and Urban Design, São Paulo, Fernanda I, an architect employed by the São Paulo City Hall.

15. Solange Carvalho, "Analyses of the morphological aspects and the Appropriation of the landscape in two squares of the Vila Canoas Favela – a reflection on the intervention of the Bairrinho Program in Rio de Janeiro", *Paisagem e Ambiente*, no. 27, 2010: 31–51, https://doi.org/10.11606/issn.2359-5361.v0i 27p31-52; accessed 10/12/20.

16. Jane Jacobs, "The death and life of great American cities" (Vintage Books Ed., dec. 1982), 35.

17. This is the only section of the Green Path that was built according to the original design.

18. Benetti, "Costuras urbanas na Avenida Central do Morro do Alemão", 101.

19. Secretaria Municipal de Habitação de São Paulo - SEHAB. Habita-SAMPA, "Relatório de Avaliação Pós-Ocupação: Parque Fernanda I, Jardim das Rosas, Jardim Irene II, contrato n. 0218.612-04/2007" ("Post-Occupancy Assessment Report: Parque Fernanda I, Jardim das Rosas, Jardim Irene II, contract no. 0218.612-04/2007"), (São Paulo, 2014), 87.

20. Name given in the slums to the groups of young people linked to the drug trade, who sit in squares and strategic accesses to watch over the territory.

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Chapter 14
Villa 31: Regeneration as a Consequence of Social Urbanism

Marcela Riva de Monti

Abstract The contemporary urgency of understanding informality and its methods of intervention has driven a growing academic interest in the topic. For a long time, expulsion was a common practice. Thus, these parts of the city were represented as vacant land, a form of absence that was not to be incorporated into the logic of the city. Outside of the planning regulations and market economy, these dwellings represent an alternative to the rent-seeking urban production patterns for the inner-city poor. These dense islands of segregation, unofficial clusters within the layout of the formal city, are known in Argentina as *Villas*. The Villa 31—Barrio Carlos Mugica (Barrio 31) is kept apart from the formal city by architectural and infrastructural barriers. Located near the most exclusive neighborhoods of Buenos Aires, this informal occupancy of public land has expanded for over eighty years. This neighborhood has witnessed periods of tolerance and forced eviction alternating in accordance with the political power in place. This case study collects the results of academic research carried out in 2009. This research set in motion the integration of these "informal" practices into official planning regulations. In turn, this led to a reinstated interest in urban regeneration through proposals and interventions from both private and public agents.

Keywords Informality · Planning · Regeneration · Renewal · Social urbanism

According to Henry Lefevre, the social value of urban space comes before its monetary value, arguing that the city should be composed of spaces of opportunity for all citizens. In turn, David Harvey redefined this notion as the right to transform oneself through the transformation of the city.[1] This is a collective right, as transforming the city depends on the exercise of power and the will of the citizens to reevaluate the urbanization process. Therefore, the vision and development of the city should no longer be in the hands of a few experts or agents, but in the hands of society. From this theoretical framework, the practice of social urbanism has developed as

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a democratic and participatory mechanism of decision-making for the city and its inhabitants. It is based on a model of a city with a multidimensional character that articulates political, economic, social, and cultural processes. Politically, it proposes a more democratic city that appeals to citizens as active subjects, the protagonists of the urban transformation process. Socially, the idea builds an inclusive and equitable city where people have real access to services that improve their lives. In economic terms, the model is committed to a city that is competitive and integrated with the world.[2]

For much of the twentieth century, reflections on the city were directed toward the construction of the "new city," which involved urban expansion and uncontrolled growth. Afterward, the gaze turned to the consolidated city and especially historic centers or obsolete areas. Recent processes of rural-urban migration show that issues of informality and the urban poor have become important in contemporary urbanism, especially in developing countries.[3] The morphology of Latin American cities is mostly determined by segregation caused by economic forces. In Buenos Aires, the drastic pauperization of a large part of society and the lack of a consistent public housing policy, both of which lasted many decades, have constrained the access to quality urban spaces for low-income populations.[4] As such, public land occupation becomes the main strategy for habitat construction. Therefore, the dispute over the right to live in the city supports a rationale of conflict over vacant, underutilized urban land.[5]

Characterized by their highly dense urban fabric, informal settlements create an urban and social framework that diverges from the planned city. Historically, the dominant practice has been expulsion; these parts of the city were depicted on maps and urban plans as vacant land, as a form of absence according to the logic of the city. Outside of planning regulations and the market economy, these dwellings represent the alternative to the rent-seeking patterns of urban production for the inner-city poor. These dense islands of segregation, unofficial clusters within the layout of the formal city, are known in Argentina as *Villas*.

The Villa 31 Barrio Carlos Mugica (or Barrio 31) is an informal settlement located in the same district as the most exclusive developments in Buenos Aires, separated from the formal city by architectural and infrastructural barriers. Originating in 1940, this area of 72 ha has always been contested by the official narrative.[6] Accordingly, it has never received basic municipal services such as sanitation, running water, electricity, public transport, and street lighting. Until 2002, planning laws defined it as vacant industrial land attached to an extension of the Port of Buenos Aires.[7]

In 2009, Law 3343 was passed which became a blueprint for urbanization of the area.[8] The law resulted from academic research carried out by the Institute of Human Space of the Faculty of Architecture, Design, and Urbanism of the University of Buenos Aires in collaboration with the Department of Sociology and Politics of Rio de Janeiro. However, due to political and financial constriction, the urbanization process never took place. In 2019, Law 6129 was sanctioned. Incorporating many of Law 3343's guidelines, the document includes a detailed intervention for the area, contemplating the settlement's urbanization and the construction of new social housing projects to accommodate families who would lose their units (Fig. 14.1).[9]
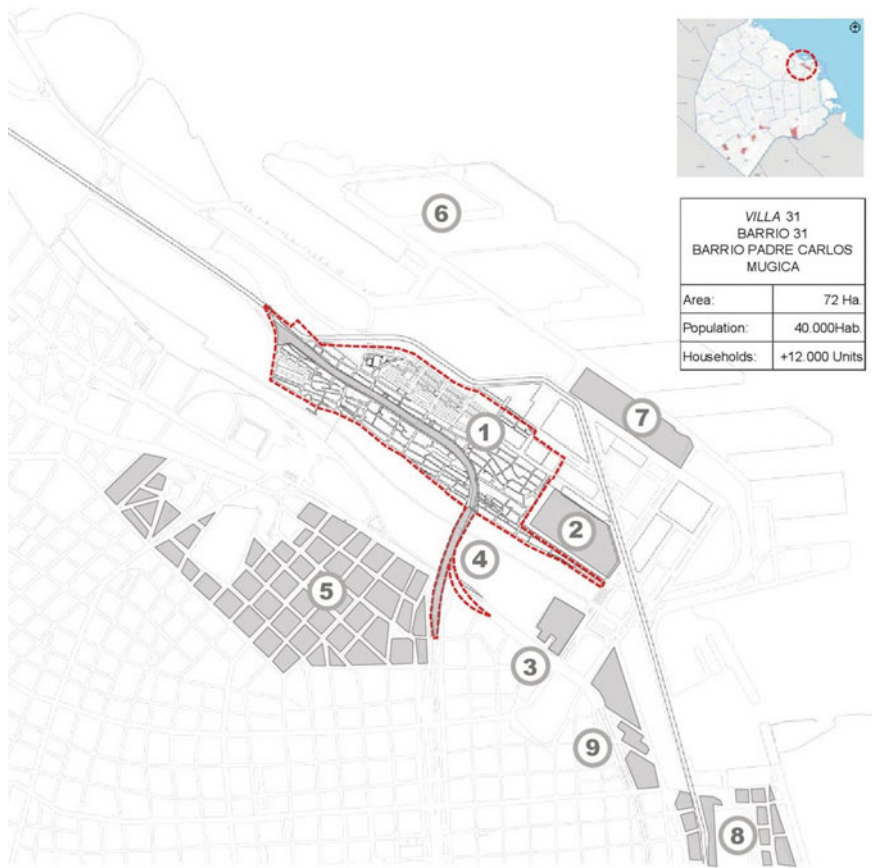
Fig. 14.1 Key: (1) Villa31 (Barrio 31) Carlos Mugica, area of intervention. (2) Retiro Bus Terminal. (3) Retiro Train Terminal. (4) Illia Highway. (5) Recoleta Neighborhood. (6) Port of Buenos Aires. (7). Buenos Aires Cruise Terminal. (8). Puerto Madero Neighborhood. (9). Catalinas Business Center

This process would result in displacement due to road widening, the building of new facilities, and the introduction of public spaces into the urban fabric. At the same time, this law finally regulates the dispute over the legality of unsanctioned constructions as title deeds will be issued for each unit.

This chapter assesses, based on the compilation of official planning documents and other interventions and initiatives by the private/public sector, new interest in the regeneration of this area within a larger urban context. The aim is to trace the trajectory of the proposal after the enactment of Law 3343, the first legislation to recognize the right of residency for inhabitants in Villa 31.

Barrio 31—Integration

The conceptual framework for this first intervention links contemporary territorial practices with the production of theoretical knowledge in a dialectic that pursues the development of more just and inclusive cities. With this new paradigm, the real city arises from traditional urban planning practices to position itself as an object of study with mutable, unpredictable, and heterogeneous characteristics. As Raquel Rolnik explains, "...as an object that has to be considered with its contradictions, assuming the territory as a place of conflicts."[10] The successful experience of the Favela-Bairro program in Rio de Janeiro acted as an unavoidable antecedent, which made it possible to understand there was not only a deficit of suitable housing, but instead and most importantly, a deficit of the city and deficit of the right of all inhabitants to live and enjoy it:

> Faced with the urban duality of formal-informal, the aim was to recover the urban project as a tool for transformation, capable of qualifying and quantifying inclusion policies. The public space, the social facilities, and the commercial activities were the ones to outline the urban social integration. It was about transcending the traditional concept of housing policies as mere housing solutions to move towards designing integral city policies, where informality is not an anomaly to extirpate, but a portion of the urban fabric to intervene in order to achieve a socio-spatial articulation with the rest of the urban structure.[11]

The urban fabric of Barrio 31 is divided into ten neighborhood units. Each is organized around an open space, in most cases a small soccer field surrounded by a communal center consisting of a canteen, nursery school, and first aid room. The organic spatiality of the settlement, one that incorporated the housing units into the existing social fabric, was included in the preliminary scheme. A portion of the project mapped out the settlements to visualize them as part of the urban fabric. The other portion focused on listening to the needs of residents and reaching consensus about the intervention. The starting point was personal interviews, followed by information-sharing meetings to promote the participation of inhabitants in planning decisions. The last stage was implementing a representative body to work alongside planners to develop a final scheme.

The intervention was planned as an operation of urban acupuncture to be carried out with the local workforce over an extended period of time to gain trust and build consensus. The scheme was structured at different levels, such as the macro-scale border park, a public square that articulated the project at a community level, and small-scale interventions such as urban scenery, basic infrastructure, and home improvements. New housing units for relocated residents were proposed on adjacent vacant land to the east of the settlement. Additionally, some parcels for private development were allocated with the dual purpose of financing urbanization projects and initiating the process of hybridization between the two sectors. The legal possession of the units, based on an (ad hoc) population census, was proposed. Sales would be restricted, and the aggregation of plots constrained. The intervention on the Villa suffered many years of delay due to political incompatibilities between the local government (the driver of the proposal) and the national government that owned most of the land ascribed to the intervention.

Barrio Padre Carlos Mugica—Regeneration

In 2016, the urbanization process began when both governments became politically aligned, and Argentina once again had access to international funding. This time, the strategy followed the successful interventions undertaken by the City of Medellín after being awarded the Lee Kuan Yew World City Prize in 2016.[12] The legal framework for the intervention is Law 6129 Barrio Padre Carlos Mugica. To ensure a definitive settlement, it clearly stated that no forced evictions would be allowed. The law also assured the provision of necessary funds to carry out the regeneration project.[13] The intervention focused on the structural needs of the settlements, the existent social fabric, and spatial conformation as proposed by the previous scheme. Mobility improvements included better road access, widening roads, and expanding public transport (Fig. 14.2).[14] To enhance internal and external connectivity and under the guidelines of the Gehl Studio, the Commercial Arcade Avenida del Inmigrante would connect the Buenos Aires Cruise Terminal and Retiro Bus Terminal with the main plaza of the barrio.

An institutional presence was materialized by the relocation of the Secretary of Education into new facilities and the Latin American headquarters of the Interamerican Development Bank (IDB),[15] a bridge-like building crossing over the train tracks to connect the settlement with the Recoleta neighborhood.[16] The intervention in social infrastructure included the Mugica Education Pole and several other interventions scattered throughout the area.[17] To promote integration with the city, three food courts were proposed: El Bocado gourmet food market, Feria Latina food
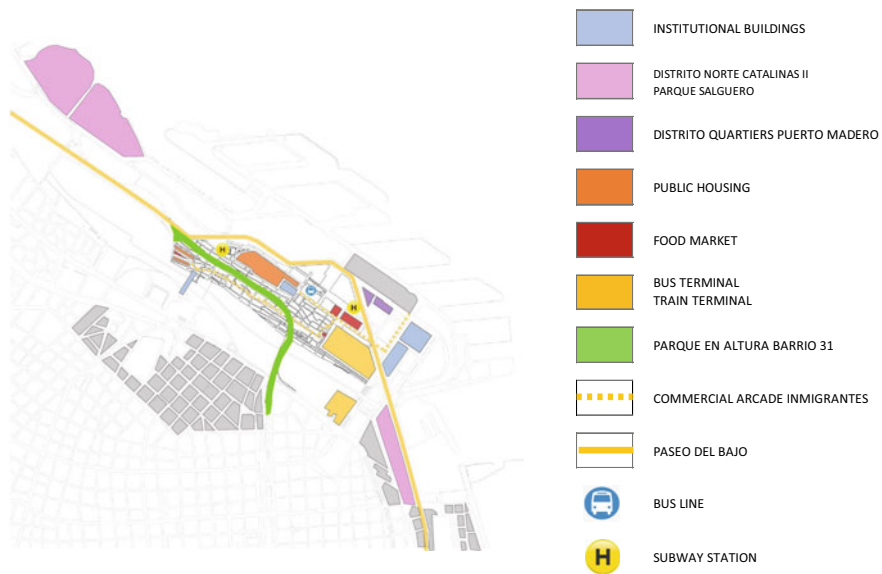
Fig. 14.2 Map of the Villa 31 and the Retiro Station area. *Drawing* G. Iglesias Molli

market at the pedestrian access to the Barrio, and the Feria Al Plato local food market near La Containera.[18]

To accommodate displaced families due to the new path of the Arturo Illia elevated highway, two traditional (four-story) medium-rise social housing complexes have been built: La Containera of 120 units and YPF of 1200 units.[19] On the eastern edge of the site toward Paseo del Bajo, the scheme proposes four high-density (seven-story) plots for residential use, two smaller plots allocated for medium-density (four stories—12 m height) residential use, as well as three plots with residential and mixed-use social facilities. Since these areas are still in the process of urbanization, the final purpose of these plots remains unclear; they may remain public land or be sold to private investors.

International institutions are providing funds for specific projects and technical support. The World Bank is funding community engagement programs and the improvement of the physical urban setting, infrastructure, and housing.[20] The IDB is funding a new headquarters for the Secretary of Education, upgrading public spaces, constructing its headquarters, and building the Mugica Education Pole.[21] Public land sales from Parque de la Innovación and Distrito Norte Catalinas II will finance part of the government's investment in the project.[22]

These projects were conceived to integrate the physical space of the *Barrio* with the city. "La llegada del Estado al barrio," (...the State is arriving in the neighborhood) as the official narrative advocates. It seems clear that the real intention behind the scheme is to mutate the current reality into a space of consumption and commoditization:

> The re-urbanization process, despite its financing, has been slow during the four years since work started. Of the 6,153 houses to be retrofitted, only 19% are finished. Similarly, from a total of 1,081 new units, only 9% of the families have been relocated.[23]

These urban regeneration operations are likely to result in access to a better quality of life, but far from the standards of the rest of the city. At the same time, they open the door to new conflicts. Namely, the eviction of tenants by forcing them to pay higher rents to continue living in the neighborhood.

One of the law's main goals was to secure the original population's right to reside in this part of the city. Despite all efforts, the situation remains precarious. The title deeds can be sold on the market. The only restriction is that the government has the first right of purchase for five years. Currently, as ownership is atomized in very small subdivisions, the area is not adequate for private real estate investments. The law allows for the agglomeration of lots to a maximum size of 250 m^2 with a frontage not exceeding 10 m. This new aggregated plot will be similar to a mid-size plot in the City of Buenos Aires.[24] Rather than securing a home, the formalization of ownership may introduce market mechanisms into a place with a significant income gap in relation to the formal city. Given its urbanization, development possibilities, and premium location, these title deeds could then facilitate the business of real estate speculation.[25]

A Renewed Relationship between the Waterfront and the City

The interventions near Barrio Carlos Mugica are strategic to the future vision for the entire area. Public intervention can influence the land value by regulating land use, creating flexible and particularized planning rules, building infrastructure, and releasing land for new development. Therefore, the improvement of the conditions and urban image of Barrio Carlos Mugica, along with its waterfront location, will favor the development of real estate projects in the adjacent area (Fig. 14.3). These large-scale urban renewal projects produce new demand and transform land profitability, which frequently triggers gentrification.[26]

In 2016, Jan Gehl Studio was invited to Buenos Aires to implement a new vision for the city.[27] After this first approach, the commission of the Buenos Aires Strategic Plan 2017-2027 followed suit. Using these guidelines, government interventions in the bordering area began to accelerate as several projects were completed in a short period of time.[28] In addition to the IDB Headquarters building, other interventions include the *Paseo del Bajo,* a road corridor parallel to the Rio de La Plata connecting the southern and northern parts of the city, the refurbishment of the Retiro Train Station, and the Parque en Altura Barrio 31 Competition proposal to convert the footprint
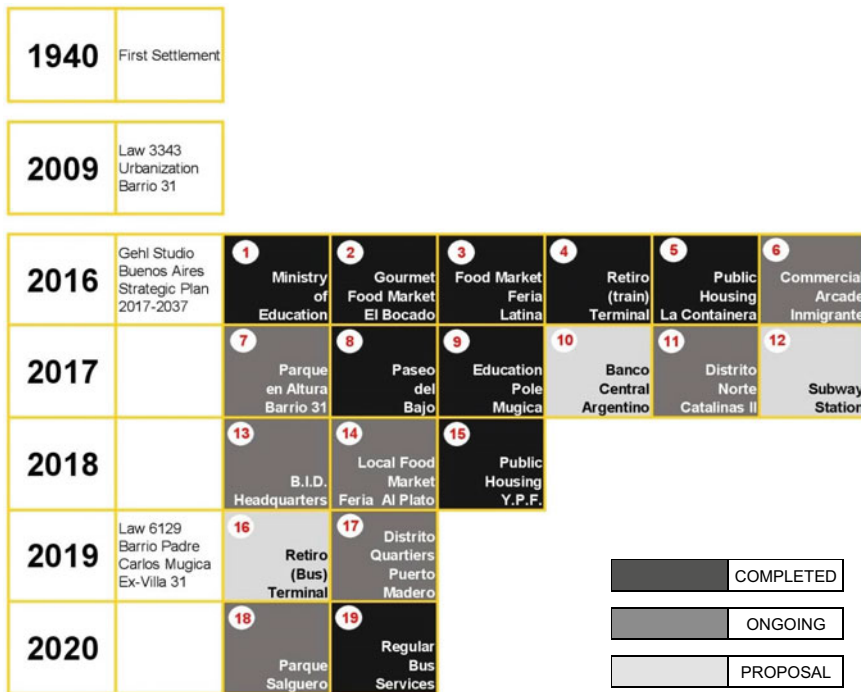
Fig. 14.3 Timeline. *Drawing* Marcela Riva de Monti

of the Illia highway into an elevated park like the High-Line in New York.[29] Other proposed interventions include relocating the Argentine Central Bank headquarters to a vacant plot south of the project, two new subway stations (Padre Mugica to the north and Terminal de Omnibus to the south), and new plans for the Retiro Bus Terminal.[30]

Two large plots of public land near the project were also set for development. To the south, a former railyard of 13 ha became a complex of premium office and mixed-use buildings referred to as Distrito Norte Catalinas II.[31] To the north, Parque Salguero, a plot of 32 ha on the Rio de La Plata, which currently is a green area and public facility, will be transformed into a mixed-use and residential development.[32] The private investment sector is also engaged in revitalizing the area by developing a high-end, mixed-use complex on the site of the former Hospital Ferroviario (Railway Workers Union Hospital).[33]

Conclusion

The process of change in cities is both inevitable and beneficial. It is inevitable because new demands and opportunities are generated for economic progress and the improvement of society. It is beneficial because the existence of forces of change creates opportunities to adjust and improve conditions in urban areas.[34] This concept has been historically applied to the formal city. For the informal city, change typically means uncertainty and insecurity. Villa 31 Barrio Carlos Mugica (Barrio 31) has been under tremendous pressure to become a model project for Latin American informal settlements seeking to find the right solution to integrate the Villa-Barrio into the formal social and financial fabric of the city. Its geographic location and the transgression of a precarious settlement on valuable land constitute a subversion of typical principles. The purchasing power of inhabitants is the main criterion for judging whether they merit access to the city. Barrio Carlos Mugica will become the 49th neighborhood of Buenos Aires. Its organic features have been incorporated into city maps and planning rules. The needs and conditions of its inhabitants are now part of the sample group for city indicators and statistics.

With government-led physical interventions in the area, it is evident that public works have arrived in Barrio Carlos Mugica. However, the new buildings, renowned architects, and urban planners might not be enough for integrating a diverse and organic urban fabric. Planning laws must consider the morphological, legal, and economic aspects alongside the social aspects of city production. Therefore, there is a need to consider the actors, practices, logics, and potential conflicts that inevitably arise in a scenario with notable asymmetries. From this perspective, it is inevitable to assume that the city is produced by a multiplicity of agents whose actions must be coordinated for the improvement of urban policies and the public interest. Therefore, it is central to explore the different experiences of contemporary urban management. It is important to identify the potentialities and limitations of becoming new models in this paradigm, while maintaining specificity in each case.

These strategies of urban intervention, known as social urbanism, are characterized by strong elements that enhance the environment of neighborhoods, generating benefits for urban marketing in cities, and giving governments the appearance of progressiveness. In reality, they place the inhabitants of informal neighborhoods at the risk of expulsion.[35] The evidence suggests that this narrative is becoming strained. Its "true effects" are weakened partly because of the success of converting an internal socio-spatial project into an external marketing strategy.[36]

As stated by María Cristina Cravino, "The main objectives are to generate a better investment climate for real estate developers close to the intervention zones, to improve tax collection through the formalization of businesses and families, and to expand the customer base of utility companies. At the same time, they open the door to new conflicts, in particular to the tenants, as they may be evicted in the process or be forced to pay higher rents to live in the neighborhood."[37] This situation must not be overlooked, particularly since families have not yet received the title deeds to their homes. This plan has few restrictions regarding the sale of units and/or the agglomeration of more than one unit under the same certificate.

Endnotes

1. Economic geographer. Professor of anthropology and geography at the Graduate Center of the City University of New York.
2. Toro Ortiz, Deiron Andres. "Urbanismo Social Y Justicia Espacial: Análisis De Los Proyectos Urbanos Integrales De Medellín En Relación Con El 'Modelo Barcelona'." (2017).
3. According to the World Bank database, almost 30% (data for 2018) of the world's urban population lives in slums. Access data from: https://data.worldbank.org/indicator/EN.POP.SLUM.UR.ZS; accessed October 20, 2020.
4. The situation is aggravated as the meager income is generally from informal work.
5. For more information with regards to the social housing situation in Buenos Aires refer to Jauri, Natalia. "Las Villas De La Ciudad De Buenos Aires: Una Historia De Promesas Incumplidas." Question 1, no. 29, 2011.
6. In 2009 the area of the settlement was 32ha, with a population of 27,000 and 7950 households. By 2019, the regeneration area became 72 ha with a population of 40,000 and over 12,000 households.
7. "Location and the history give Villas 31 great strategic and symbolic value. Strategic value, because the area occupied by the Villa is considered valuable in urban terms. Symbolic value, because the existence of a precarious settlement on "valuable" lands constitutes a subversion of the principle according to which the criterion for judging merit for access to the City is the purchasing power of the inhabitants." Extract from law 3343. 03.12.2009 - Urbanización del Polígono Villas 31 y 31 bis. Own translation.
8. To access to Ley 3343, refer to this link http://www2.cedom.gob.ar/es/legislacion/normas/leyes/ley3343.html, and this link https://www.buenosaires.gob.ar/sites/gcaba/files/anexo_1_0.pdf; accessed October 20, 2020.

9. Access to Ley 6129 from this link https://boletinoficial.buenosaires.gob.ar/normativaba/norma/448918; accessed October 20, 2020.

10. Rolnik, Raquel, Brazilian architect and urban planner. Interview by Marcelo Corti para El Café de las Ciudades, año 1, número 1, noviembre de 2002. Accessible from http://www.cafedelasciudades.com.ar/nume ro_uno.htm.

11. Transcript from Fernández Castro, Javier. "Anteproyecto Urbano Barrio 31 Carlos Mugica." Revista Iberoamericana de Urbanismo. 3 (2010): 38–46. Own translation.

12. Considered the "Nobel Prize of cities". More information, https://www.leekuanyewworldcityprize.gov.sg/; accessed November 2, 2020.

13. The infrastructure (sewage, electricity, running water, paving of the streets, etc.), the new social infrastructure, the betterment of the public space, and the retrofitting of the existing housing. For information about the intervention in this area, refer to https://www.buenosaires.gob.ar/jefaturadegabinete/secretaria-de-integracion-social-y-urbana/integracion-urbana, https://www.pressreader.com/argentina/arq/20190716/281865825050276; accessed December 5, 2020.

14. Two bus line, Nº 33 and Nº 45 started servicing the Barrio from January 2020.

15. Polo Educativo Maria Elena Walsh. For information, refer to: https://www.buenosaires.gob.ar/desarrollourbano/concursos/concurso-nacional-de-anteproyectos-para-el-polo-educativo-maria-elena; accessed October 20, 2020.

16. The project by Pritzker prize winner Arch. Alejandro Aravena, is on hold due to local construction permits as well as financial constraints. For more information refer to https://www.buenosaires.gob.ar/jefedegobierno/noticias/la-ciudad-anuncio-la-construccion-de-un-moderno-edificio-puente-del-grupo; accessed October 15, 2020.

17. The national architecture competition of 2017, is now under construction. The project enlarges the former Escuela Banderita to allow more children from villa 31 to access all levels of education. For more information refer to https://arqa.com/arquitectura/polo-educativo-mugica.html; accessed October 20, 2020.

18. Conceptually design after Mercado de La Boqueria in Barcelona or Borough Market in London

19. The name refers to containers, as the site it is located used to be a deposit for the containers from the Port of Buenos Aires https://www.buenosaires.gob.ar/jefaturadegabinete/secretaria-de-integracion-social-y-urbana/viviendas-nuevas-en-containera.

20. https://www.buenosaires.gob.ar/sites/gcaba/files/doc_marco_reasentamiento_-_bm.pdf; accessed October 20, 2020.

21. Banco Interamericano de Desarrollo https://www.buenosaires.gob.ar/sites/gcaba/files/marco_de_politica_de_reasentamiento.pdf; accessed October 20, 2020.

22. With a total area of 16.77 ha the piece was divided into 3 plots. One of the, 1.5 ha with a total buildable area of 120,000 m^2 and 100 m height was sold to finance the urbanization of the Barrio. The rest of the land belong to the Parque de la Innovación with a total buildable area of 300,000 m^2 for

mixed-use developments. https://www.buenosaires.gob.ar/desarrollourbano/concurso-nacional-ideas-urbanas-parque-de-la-innovacion; accessed October 20, 2020. and https://www.infobae.com/educacion/2019/06/11/la-uba-tendra-15-mil-metros-cuadrados-en-el-parque-de-la-innovacion-y-manejara-una-estacion-de-servicio/; accessed October 20, 2020.

23. Information gathered from the official website, accessed 29/01/2021 https://www.buenosaires.gob.ar/sites/gcaba/files/ba_integracion_mayo_2019.pdf; accessed October 20, 2020.

24. In the city of Buenos Aires, the characteristic frontage is 8.66 m, a measurement that comes from colonial times, when the measurement was given in varas, a Spanish unit that was equivalent to 0.86 m. Thus, the plots of land had 10 varas in front. The depth measurements vary greatly, depending on the type of block, generally from 17 to 50 m.

25. The price of Favela Barrio homes whose ownership was formalized increased. For more information refer to Handzic, Kenan. "Is Legalized Land Tenure Necessary in Slum Upgrading? Learning from Rio's Land Tenure Policies in the Favela Bairro Program." Habitat International 34, no. 1 (2010): 11–17.

26. Cuenya, Beatriz. "Grandes Proyectos Y Sus Impactos En La Centralidad Urbana." Cadernos Metrópole. 13, no. 25 (2011).

27. The studio Jan Gehl is famous for being after the transformation of cities like New York, London, Melbourne, Seoul, and Copenhagen.

28. The funds for this project were provided by Banco de Desarrollo de América Latina (CAF) with funds from the central and local government. For reference see https://www.buenosaires.gob.ar/planeamiento/visionciudad/paseo-del-bajo; accessed December 2, 2020.

29. With an extension of 2 km, the project seeks to improve the lack of green space within the polygon of the Barrio; it is now under revision due to economic constraints.
   For information refer to https://www.buenosaires.gob.ar/desarrollourbano/concursos/concurso-parque-en-altura-barrio-31-retiro; accessed October 20, 2020. and https://www.buenosaires.gob.ar/sites/gcaba/files/info_participacion_ii.pdf; accessed October 20, 2020.

30. Now under bidding for the new lease. The proposals include a shopping mall and a hotel. For references refer to https://www.clarin.com/ciudades/terminal-retiro-empresas-presentaron-propuestas-sacarla-abandono-olvido_0_ZP1v6Gvh6.html; accessed October 6, 2020.

31. An area of 12.82 ha, divided into seven plots for high-rise office buildings and five plots of medium density mix-uses with a total buildable area of 296,600 m^2. For more information, refer to https://www.youtube.com/watch?v=eJ1DIfdAETM; accessed October 28, 2020.

32. The total buildable is 200,00 m^2. For details of the winning scheme, see: https://observatorioamba.org/planes-y-proyectos/caba/proyectos/2020-parque-salguero-concurso-nacional-de-ideas/ficha; accessed October 30, 2020.

33. Distrito Quartier Puerto Retiro. For information, refer to http://www.distritoquartierpuertoretiro.com.ar/; accessed October 20, 2020.

34. Roberts, Peter, and Hugh Sykes. Urban Regeneration: A Handbook. Sage, 1999.
35. Cravino, M. C. "Urbanismo Social En Los Procesos De Urbanización De Villas De La Ciudad De Buenos Aires (2015–2018): Deconstruyendo Los Discursos Y Prácticas." en Voces en el fénix no. 71 (2018): 64–71.
36. Brand, P. (2013). Governing inequality in the South through the Barcelona model: social urbanism in Medellín, Colombia. *Interrogating urban crisis: governance, contestation, critique*, 9–11.
37. Cravino, María Cristina, and Ariel Matías Palombi. "De la urbanización a la solución de mercado. Políticas públicas y nuevos desafíos en las villas de la zona sur de la Ciudad de Buenos Aires," in UPE Conference, La Plata, September 16–19, 2014.

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Chapter 15
El Amate in Guatemala City: An Urban Intervention

Cecilia H. Giusti, Maria Paula Perez, Irayda Ruiz Bode, and Mabel Daniza Hernandez

Abstract This chapter presents an urban intervention in Guatemala, one of the poorest countries in Latin America. Like many other large cities in Latin America, the main street in downtown Guatemala City was occupied by "informal" street vendors, and the city tried once and again to expel them and "clean" the city. After long struggles with local authorities, 677 informal vendors reached an agreement with the city and were peacefully relocated in 2010 to a nearby ad hoc location, the El Amate market. El Amate is still functioning, the streets are being beautified, and new investment is transforming downtown Guatemala City. Meanwhile, vendors are still "informal," poverty is still a reality, and the city is only nominally benefiting from new private investment. Our research reveals the presence of a progressive young group of urbanists who understood the need to include street vendors in the envisioning of the city. Instead of fighting with them, the city invited street vendors to participate in the negotiation. Two facts seem to be crucial for the relative success of this intervention: first, El Amate remained downtown; and second, the city added a budget line providing basic services for vendors. Instead of treating informality as a problem to be eliminated, vendors could be perceived as participants in both the economy and city life. This urban intervention highlights how a municipality in a poor country dealt with this fact. Street vendors are here to stay and should be seen as contributors to better cities.

Keywords Informal · Street vendors · Urban intervention · Guatemala

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Informality (in terms of forms of income generation, forms of settlement and housing, and forms of negotiating life in the city) has become the dominant mode of behavior—in many urban centers, it is now the norm and no longer the exception.[1]

This is the case in the developing world, and more specifically, in large cities in Latin America which form the focus of this chapter. It is then understandable that informality has attracted governmental attention as it represents an important share of local economies. However, there is no consensus on the best way to approach informality. Many local authorities claim that informal street vendors increase crime, hamper tourism, and create public health hazards. Responding to such concerns, municipalities have implemented a variety of policies aiming—mostly unsuccessfully—to end street vending. One of these is the displacement and/or relocation of street vendors to alternative places so that urban public spaces can be "recovered."[2]

Other more innovative and complex policies addressing informality have emerged, especially in the Global South. We discuss one example in this chapter. Among the most dramatic cases of informality happened in Guatemala City, in Zone #1 on 6th Avenue, a major street in the heart of downtown. Street vendors had appropriated the entire street and most of the sidewalks on 6th Avenue. This resulted in an ongoing conflict with adjacent formal vendors, disinvestment, health hazards, and a steady decrease in property values.

The City of Guatemala first responded to these growing urban problems by expelling street vendors through the use of police force. However, after each police intervention, vendors returned to their spaces again and again. This back and forth between police and street vendors lasted more than ten years until the situation became intolerable; it was evident that city officials needed a different approach. In 2008, the city commissioned a comprehensive study of economic activity engaging both formal and informal vendors. It attempted to better understand the problem and how to approach it in a more sustainable way. The study focused not only on the economic activity of 6th Avenue, but on the Corredor Central Aurora-Canas, a commercial corridor that crosses the city from north to south. The objective was to understand the economic rationale of inter- and intraregional commerce, identify distribution and delivery channels, and pinpoint the demands and needs of both formal and informal vendors within this commercial corridor. To do so, data was gathered in the form of surveys from both formal retail and informal vendors and spatial analysis of the whole corridor.

As a result of that 2008–2009 study, a long and complex negotiation began between local authorities and the organization of street vendors. The outcome was an agreement signed by both sides in which the vendors voluntarily would stop street vending, and the city would build a new semi-formal market on a location nearby. This is how El Amate emerged; its location did not dramatically disrupt the economic structure of the commercial corridor. Peaceful relocation and negotiation are the core of this chapter. A brief overview of the main arguments in the literature of informality and the city are presented first, followed by a more detailed account of street vendors in Guatemala City. Following that is a brief description of the case study, the conflicting issues, and the negotiation that happened between street vendors and city officials.

Finally, the chapter ends with our main conclusions, emphasizing the lessons learned from this urban intervention in Guatemala.

Informal retail in Urban Planning

Different disciplines have conceptualized informality and informal trade, and in many cases, their approaches have evolved over time. Different theories coexist, and each highlights different aspects of informality.[3] While informality and formality have traditionally been perceived as binary concepts, recent trends have moved away from this approach to propose understanding them as parallel and comparable concepts.[4] Similarly, informality has started to be understood not as a marginal or unregulated activity, but as an organized entrepreneurial force that lacks access to education and information on how to transition to formality.[5]

These new understandings of informality and informal trade redirect policy design toward one that integrates informality in urban design, thus acknowledging its role in the economy and the city.[6,7,8] Literature in urban planning suggests that informality is actually shaping urban life[1] and needs to be acknowledged as such. This is reflected in the increasing number of peer-reviewed publications (in English, Spanish, and Portuguese) on urban informal markets—rising to more than 150 in the last decade from 51 in the period from 1988-2008.

Similarly, planners have acknowledged that informality is not independent from formality[9,10]; it involves a spatial element that explains urban life and should be understood from a work rights-based approach.[11,12,13] Based on this view, urban policies should be more inclusive by including the presence of informal vending in their design and implementation as they are important players in cities.

Planning literature has also documented worldwide urban policies that have dealt with informality. The most common approaches to informality in the city include relocations, evictions, licenses, zoning, and confiscation among other exclusionary and unsustainable policies.[14,15,16] These policies have focused on solving the negative aspects of urban street trade such as congestion, crime, public health risks, tax evasion, and unfair competition.[17] However, there is a lack of studies that incorporate and acknowledge cases showcasing the benefits of informal trade and its potential in the city. For example, street trade contributes to equity, livability, employment, safety, food security, convenience to consumers, and the provision of needed and affordable services. Few studies have advanced in documenting those rare cases in which vendors are included in the policy design and have a voice.[18,19] This chapter documents the case of the El Amate urban intervention. It highlights the ways in which it was an innovative and sustainable policy that included the input of street vendors in the design, implementation, and follow-up.

Guatemala and Guatemala City

After Honduras, Guatemala is the second highest poverty rate country (50.5%) in Latin America and the Caribbean.[20] In 2018, Guatemala ranked as the country with the lowest social policy investment as a percentage of the total GDP (7%) in the region. It is also a highly rural country; a little less than half (48.9%) of its 16,176,133 million inhabitants lived in rural areas in 2015, below the Latin America median. Most of its workforce still resides in the agricultural sector (31.2%), followed by retail (26.4%) and manufacturing (14.4%).[21] At the rural level, informality represents 75% of employment, while it accounts for 79% at the urban level and 44% at the urban-metropolitan level.

By far, the largest informality is found among the indigenous population. For every 10 indigenous workers, 8 are informal, while for every 10 non-indigenous workers, 5 are informal. According to the National Institute of Statistics, most informal street markets are located in the Department of Guatemala, which holds 20% of the total population in Guatemala City, the largest metropolitan area and national capital.[22]

According to the Guatemala National Survey of Employment and Income, informality is defined as the population that works in the following categories: (1) employees, employers, and workers of companies of less than six people; (2) independent or self-employed workers (excluding professionals and technicians); and (3) all family workers that do not get a wage and those occupied in domestic service. In 2014, 65.8% of the total working population was informal, 2.8% less than in 2012.[23] Within the informal sector, informal retail in Guatemala, which is the focus of this research, is defined as the sale of services, as well as manufactured or non-manufactured goods on public space (streets, parks, or sidewalks).[24]

Local Context

Guatemala City is organized into 22 zones or districts. Within each of these zones, a commercial corridor was identified, the "Corredor Central Aurora-Canas." This corridor crosses Guatemala City from North to South, passing through the 6th and 7th Avenues within zones 1, 2, 4, and 9. The area of the corridor overlaps with urban spaces that are considered culturally significant sites—places of historical, cultural, and political relevance such as the historic downtown, national library, metropolitan cathedral, police headquarters, National Palace of Culture, and the Supreme Court. Several commercial and retail activities—both formal and informal—take place along the corridor. These activities are important components of the national economy. Thus, a large number of hotels, restaurants, shopping centers, and markets are located along this corridor.

El Amate

The presence of informal vendors in the public spaces within the corridor is a consequence of the economical relevance of this area. The highest concentration occurs in Zone 1, where there were an estimated 2000 informal vendors (or more than 3500 during the holiday season). Zone 1 is where most of the historic downtown district, museums, and cultural venues are located. Within this zone, 6th Avenue showed the highest density of vendors in public spaces. These street vendors were well organized and fairly well established with complex markets that met local demands (Fig. 15.1). Street markets were densely populated, and economic activity flourished, but at the same time, the historic downtown was impacted, as well as the formal retail along 6th Avenue and adjacent streets. The city recognized that the economic potential of the formal retail establishments became overwhelmed by highly dense informal activities. It was also evident that many issues related to public hazards, illicit activities, and crime were increasing in the area.

The city tried for about ten years to remove street vendors from 6th Avenue to "clean" the public space, but the street vendors returned to their stalls time after time. After so many unsuccessful attempts, it was evident that this was not a sustainable solution for the city. The city needed to change its approach to "recuperate" the public spaces and to minimize the negative effect on current vendors. The city decided to negotiate with them instead of using the police force.

This new approach was based on a better understanding of the economic rationale of street vending. The economic activity and possible interventions were analyzed within the social, mobility, and economic rationales of the commercial Aurora-Cana

Fig. 15.1 View of the 6th Av. In Downtown Guatemala City during the Holiday Season, 2008. *Photo* Irayda Ruiz

corridor. Street vending was also understood as a means to absorb a growing migrant population unable to secure formal employment in the city.

To launch these efforts, the city gathered data on how street vendors operated, flows of commerce, and other key issues such as access, storage, safety, and ownership of the structures, among others. The study on the regional corridor, along with negotiations between the city and street vendors, resulted in the final and peaceful relocation of the vendors. This process concluded with the development of a new market called El Amate in which more than 1300 stalls and 667 street vendors were relocated from 6th Avenue.

El Amate Studies

Two main studies of El Amate market are the basis for this chapter. The first study was done in 2008 and 2009 prior to the relocation,[24] while the second was completed in 2016 and 2017.[18] Both studies and their outcomes are briefly described herein.

In the Ruiz-Bode Consultores study from 2009,[24] data gathering involved surveying both formal and informal vendors. Between December 2008 and February 2009, a survey was applied to a sample of street vendors from the "Corredor Central Aurora-Canas." The sample included 5% of the total street businesses that were located between 6th and 8th Avenues along 43 blocks. The surveys were applied during two time periods: (1) the end-of-the-year holidays (December 2008) and (2) the beginning of the annual selling period (February and March 2009). In order to get a representative sample, at least five surveys were randomly distributed per block. The survey collected information on a specific location, number, and quality of the structures where trade happened, tenancy, property rights, public safety, characterization of commercial activity, accessibility to parking spots, and storage.

Formal economic activity was also studied; it comprised businesses of retail, exchange, and sales of manufactured and non-manufactured goods and services. These usually included retail that was located in malls, markets, supermarkets, and public and private buildings. Information for formal retail was collected using 46 formal interviews with mall managers and casual interviews with employees, retailers, and customers between November 2008 and April 2009. The surveys collected basic unit data like area and age of the structure, a number of floors, typology as well as tenancy and ownership, operations and re-investment costs, type of retail activity, and access to parking spots.

The results of Ruiz-Bode Consultores in 2009 helped the city understand the needs of the vendors—both formal and informal—within the economic rationale of a regional commercial corridor. The city realized the need to negotiate with street vendors and considered how relocation could affect current businesses. The fact that the city was prepared and ready to listen to the needs of street vendors dramatically facilitated the process. Elements of location and accessibility (closeness to the corridor, providers, and customers), safety (regarding crime, accidents, hazards,

well-being), and the capacity of improving their businesses (education and technical assistance, storage, operation costs) were key topics in the negotiations.

The Giusti et al. study from 2018[18] was the result of a Lincoln Institute of Land Policy grant titled "Relocation of Street Vendors: The Case of El Amate." In this study, the team gathered data from El Amate vendors (the previous street vendors) that had been relocated from formal businesses along 6th Avenue. The survey followed a similar format of the 2009 survey so that the studies could be compared. Together, the Giusti et al. study allowed for an analysis of the El Amate market after it had been operating for a few years.

The vendor survey consisted of 60 questions. These included topics including general business information, relocation process, security, income, and credit, as well as additional questions related to assistance from the municipality and vendors' opinions and perceptions of the intervention process, from equity to procedural issues. The survey was applied to the entire population of El Amate. Out of the 689 total vendors working at El Amate, the team received a response rate of 56% (388 vendors).

The survey of formal businesses consisted of 45 questions. The 2009 questionnaire included physical structure, business characteristics, security, and additional questions regarding the business owners' perceptions of the relocation process. To sample the respondents, the team accounted through observation a total of 419 businesses, from which 213 were randomly approached to answer the interview. From these 213 businesses, 174 agreed to respond to the survey.

The team also studied the changes in land values along a perimeter around 6th Avenue. The data was gathered through archival research and interviews with developers and realtors in the area, including land value changes (sales and rental), land use, and urban investment.

Findings and Discussion

Next, we discuss the main findings of the results of this massive urban intervention using the two surveys, our interviews with local officials and developers, and our archival land value research. First, we found that 6th Avenue was converted into a pedestrian boulevard, reinforcing its "recovery" as a public space; the city has invested in beautifying it, installing new lighting and benches. Along the revamped 6th Avenue Street, there are now several new businesses, including upscale cafes and restaurants with considerable activity. New multi-family residential units are being built, attracting more residents into downtown.

At the time of our study, relocated vendors continued their vending at El Amate; this last fact is a remarkable difference from the ten years of contention between police and vendors before its construction. The city, in this way, was successful in relocating street vendors; El Amate had become a functioning market, and formal business, as well as new urban dwellings, was going back to downtown.

Our main concern for this chapter is the next inquiry, which is what happened with vendors at El Amate. Are they better off compared to their previous location? Would they stay at El Amate? What are the potential incentives/deterrents ahead?

Following the negotiations, the City of Guatemala created an ad hoc office to attend to the needs of low-income vendors, with a special liaison for El Amate vendors. On their side, these vendors are well organized, and their leadership meets on a regular basis with city officials; both sides report (in interviews with us) an open and positive dialogue, and at the same time, both point that their views differ regularly; the negotiations are still ongoing. Broadly speaking, they have been able to find solutions that satisfy both the city and vendors, as El Amate continues to be an important market in the area. Next, we will go into some of the main areas of negotiation.

Location and accessibility

El Amate incorporated many of the elements negotiated between the vendors and the city. For example, the actual physical location of the new market was key in the willingness to move. El Amate is only a few blocks away from 6th Avenue (less than 1 kilometer). This location was an important demand of the vendors, as it was crucial in preserving their place in the supply chain within the Aurora-Canas corridor. Another example is related to public transit; in their demands, vendors insisted on accessibility, and this was clearly and emphatically supported with a stop in the rapid transit system close to El Amate.

Design and Fairness

The shape of the physical structure, materials used, and even its colors were part of the pre-relocation negotiation. The final design, inspired by a similar Brazilian market, has a circular shape and is an open structure with many entrances around it. This was the way in which the city responded to a key controversial issue in the negotiations related to fairness among vendors in the new market. Three elements are highlighted next: (1) The circular shape and the many exits around it, as well as the easy circulation within the market, ensured that none of the businesses had a preferred location within the market; (2) fairness was reinforced by creating equal-size stalls for all; (3) to ensure equal access, and in order to avoid the power struggles evident on 6th Avenue, the new stalls at El Amate were assigned by a random lottery process, which helped to destroy the pre-existent black market and gave equal opportunity to all vendors regardless of the position of power they used to have on the streets.

In terms of the materials used, the negotiation involved budgetary constraints that were openly discussed. For example, the vendor's stalls around the circular structure have roofs that protect them from rain and wind, but the center common area is covered by a canopy, which reduced costs and was well received by the vendors; the color of the canopy was part of the agreement.

Parking

While vendors demanded a parking lot for their customers, the city opted to maximize selling spaces, accommodating 1300 stalls instead of only 667 as originally planned.

The data gathered before the process was determinant in taking this decision. During the regular selling season, 14% of the vendors declared they rented their selling structures from the municipality; this percentage more than doubled to 35.2% during the holiday season. This helped unveil the existence of a black market with an elastic number of vendors making street vending flexible depending on the time of the year. Further, there were 20.7% less owned structures during the holiday season than for the regular season, meaning that stalls were sub-renting during the peak season. Power struggles evident on the street vending were minimized in the relocation process, giving all equal-size stalls with equal locational advantages.

Safety

Street vendors expressed deep concerns for their safety while vending on the streets. Around 30% of the first study interviewees stated that either themselves or their clients had experienced crime or assaults during the last year. As they were occupying the streets, cars, bikes, or other unexpected confrontations could and did cause accidents. More than 2/3 of the vendors stated that they or their clients had an accident, especially during the holiday season. El Amate responded to this concern in different ways. The most relevant ones were as follows: first, the open circular structure, with more than two levels and doors around it, made for more visibility, dramatically reducing the chances for petty robbery; second, the city provides 24-hour safeguard services, allowing for more security within El Amate and on its surroundings; and third, there are ATMs to provide cash in a safer way for customers and vendors.

Another concern of street vendors was related to the safety and well-being of their children, especially in the case of women entrepreneurs. The city was receptive to such needs, and a day care center operates next to El Amate; this is an important service the city has provided for vendors.

"Improving Business" Performance

The city also needed to respond to the vendors' pleas for technical support. In the negotiation, the city offered vendors the option to receive training on growing their businesses and managing their finances at their new location. This was a crucial aspect of the negotiation.

However, the latest survey reveals that this agreement has not been met. When vendors were asked if they had ever received any type of technical assistance from a public institution, 95% of them answered no. Even more concerning, 59.4% of El Amate vendors were willing to get training and education on how to make their businesses better. Out of this percent, 22.7% wanted to learn about sales strategies,

Would you like to get training on how to improve your busines?

Fig. 15.2 Percentage of survey responses from vendors (before and after being relocated) on willingness to receive training on how to improve their businesses. *Authors* Cecilia Giusti, Irayda Ruiz, Mabel Hernandez, and Maria Perez

6% did not know exactly in which topic, 2% in mechanics, 1.3% in business administration, 1.4% in technology, 0.7% in sewing and 25.3% about other things. This shortcoming should inform local authorities as to the areas most needed by these vendors (Fig. 15.2).

From the surveys, it is evident that vendors will grow their business, get educated on how to do it, and their desire to continue to contribute to the economy. Giving advice and tools to empower these vendors as entrepreneurs was a key element in order to design sustainable relocation policies. Informal vendors were seen, in this way, as a potential source of innovation and growth of the economy. For example, several vendors are employers; from the survey, the city learned that 31% of the vendors declared that they hired employees at their stands. Out of this percentage, 24% hired 1 employee while 7% hired two. From these employers, 20% hired relatives while 11% hired non-relatives (Fig. 15.3).

Another key element in the negotiation was related to operation costs. Moving to El Amate would allow street vendors to substantially reduce storage costs. Before the relocation, vendors were not able to leave their stock in the stalls because of safety concerns. Vendors were operating as ambulant, and they had to pack their merchandise every evening after work and unpack it every morning. To do this, they had to rent storage units, which increased their operation costs. Most of the vendors stored their merchandise in buildings in, or close to, the downtown (22% of them), in their own homes (18%), or in formal stores on 6th Avenue (15.3%). El Amate responded to this need by providing equal storage space in each stall, making relocation more attractive as operating costs were dramatically reduced.

Banks were more willing to look at these vendors as potential clients with the expectation of a more formalized (though not completely formal) vending activity. This is presumed to be very important as their low access to credit was identified as one of the main causes of working in the informal sector. From the first survey,
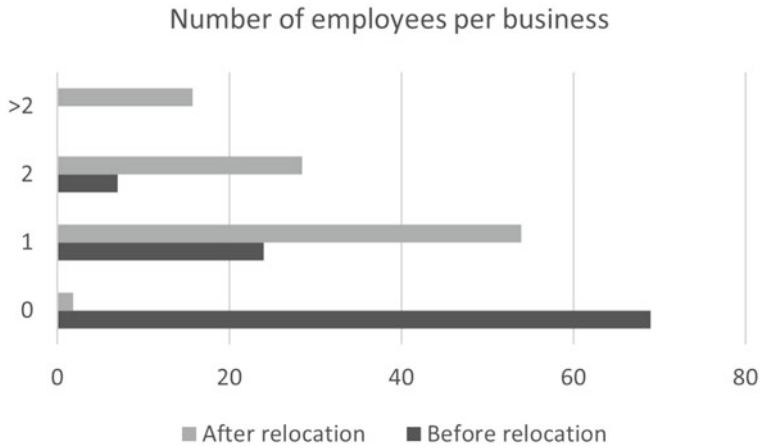
Fig. 15.3 Percentage of survey responses from vendors (before and after being relocated) on the number of employees at their businesses. *Authors* Cecilia Giusti, Irayda Ruiz, Mabel Hernandez, and Maria Perez

it was evident that only 36% of street vendors had access to sources of financing or credit (Fig. 15.4). Out of this percent, 26% got it from suppliers, 5.3% from banks, 3.3% from moneylenders, 0.7% from coops, and 0.7% from family. These numbers changed post-relocation dramatically, as seen in Fig 15.5; not only did the percentage of credit increase, but the source of credit actually reversed: Before relocation, most credit came from "other," which in most cases meant family and friends; after relocation, the source of credit came mostly from banks, showing what we pointed to before, a more positive attitude of banks toward El Amate vendors (Fig. 15.5).
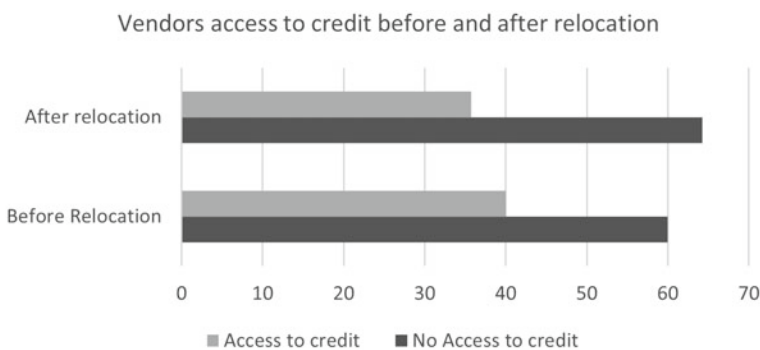
Fig. 15.4 Percentage of survey responses from vendors (before and after being relocated) on access to credit. *Authors* Cecilia Giusti, Irayda Ruiz, Mabel Hernandez, and Maria Perez

Source of credit before and after relocation
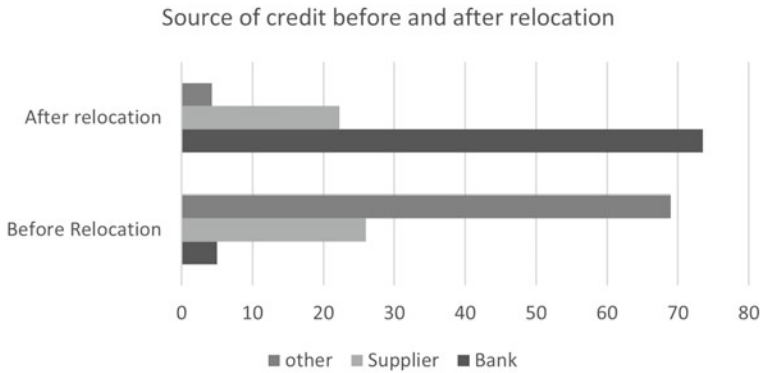
Fig. 15.5 Percentage of survey responses from vendors (before and after being relocated) onsource of the credit. *Authors* Cecilia Giusti, Irayda Ruiz, Mabel Hernandez, and Maria Perez

Conclusion: Vendors as Citizens and Entrepreneurs

One of the key factors to ensure the peaceful relocation of street vendors to the new El Amate location was the fact that city officials changed their attitude toward them. Rather than seeing them as invaders of public spaces, local authorities understood their economic rationale and contributions to the city's functioning. After a comprehensive data gathering, including a first-ever survey of informal vendors and formal businesses, the city switched the discourse and viewed "street vendors" as entrepreneurs. Both the city and the vendors themselves adopted a forward-thinking perspective about their businesses, and their social and economic impact in the city.

We observed that the shift in understanding, and the forward thinking, made the whole difference in the negotiation process to relocate street vendors. On top of empowering them, the negotiation opened doors that seemed impossible before; for example, it put vendors in a better position with banks willing to work with them to open checking accounts and even start the process to access credit for their business. Further, vendors agreed to create strategic alliances with formal businesses that could complement their commercial activities.

The active participation of street vendors on the design of El Amate market was also an important factor for the success of the relocation; their views were incorporated in the actual design, from the basic layout of the market to even the colors and construction materials that were used. Issues of fairness and equity in the distribution of stalls were perceived favorably and helped break the previously unfair street hierarchy.

Another critical and positive factor that explains the success of this intervention was the location of El Amate; it respected the economic rationale of street vending within the Aurora-Canas Corridor. Instead of moving vendors far from downtown (as in previous unsuccessful attempts), the negotiators were resolute on maintaining its prime location.

After more than 8 years, vendors were still there. Vendors felt that, for the first time, they were treated as entrepreneurs, as humans, and were included in the city's agenda. This is expressed in the surveys and interviews; they felt they were an important part of the public space discussion, and acted accordingly. The relocation was done peacefully, the street was "recovered," and re-investment on the formal commercial activity was observed.

El Amate is safer than vending on the streets; access to clean restrooms, eating facilities, ATM machines, cleaning services, and surveillance are all clear improvements in the quality of the vending experience, both for customers and vendors. The construction of a day care for vendors and their employees places these services at a higher level, a real improvement rarely available for most vendor employees.

The collaboration between El Amate vendors and city officials is still active and positive. However, some of the original demands have not been met yet, and this means that both the city and local entrepreneurs need to keep the negotiations open. For example, the technical support promised for vendors has not been as strong as expected, and very few businesses have been offered financial and technical training, and several have been denied credit from financial institutions.

Further, relocating vendors to a safer, cleaner, and more humane space does not change the actual "informality" of their businesses; they are still to a great extent underemployed, they are still low-skilled labor poorly compensated, and a large portion of their merchandise does not pay formal taxes.

Finally, this urban intervention has solved some but not all aspects of the so-called informal economic activity. As long as the population engaged in semi-formal vending is low-skilled, with little access to credit, the risk of them going back to the street continues. Training and access to credit are key to ensure a more permanent solution.

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Chapter 16
Cuba's Informal Gardens: Situating State Support and Public Participation

Carey Clouse

Abstract The Cuban model for urban agriculture blends both grassroots and state-supported components to boost food security on the island. This extensive system operates at multiple scales, from formal public landscape initiatives to improvisational and ever-evolving productive spaces. In Cuba's informal urban gardens, self-provisioning can be considered a political act. As such, urban agriculture has become a political project, fusing notions of self-sufficiency, and spatial opportunism with ideals of Cuban independence and solidarity. These productive landscapes offer useful lessons for the design of foodsheds and highlight the particular importance of framing food security campaigns to support long-term success.

Keywords Cuba · Informal public space · Urban agriculture · Cooperative urbanism · Guerrilla gardening

In Cuba, urban agriculture was once deployed as a powerful means of confronting food insecurity, where locally grown crops supplanted outsourced agriculture and strengthened ties between producers and consumers. In this state-sanctioned model, city dwellers transformed underused urban spaces into sites for food production through local food security campaigns. The sweeping conversion of otherwise idle landscapes into agricultural production can only be attributed to the strategic decision-making of an embargoed state, acting decisively during a crisis period. That this work continues today and has remained viable during the course of three decades, signals the widespread adoption of urban agriculture into Cuban life, and highlights the lasting significance of this political project.

In Cuba, urban farming initiatives have found form in the well-documented back-yard garden, as well as in state-run farms, food parks, *organopónicos*, and even the edible schoolyard.[1] Somewhat less conspicuous are the informal efforts that occupy public urban space: interventions characterized by opportunistic animal husbandry and the improvisational cultivation of edible crops in public areas (Fig. 16.1).

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Fig. 16.1 Food provisioning is overlaid onto streetscapes in Havana. *Photo* Carey Clouse

Although these productive landscapes lie in plain sight, they lack the signage and spatial demarcation that signals an intentional undertaking. Moreover, while associated growers may benefit directly from the state's structural and legal support of urban agriculture, the informal nature of their gardens affords them the freedom to make their own decisions, try new techniques, and improvise.

This chapter highlights the ways in which Cuba's informal urban gardens have evolved during the past thirty years, charting their genesis, changing structure, and collective conception in current cities. While these interventions might be considered informal in terms of their physical shape, management, and performance, they also benefit from strategic state support and cooperative social buy-in. Indeed, the backdrop of socialism stands out as a central factor supporting Cuba's informal urban gardens' success and offers up a progressive model for transference in other places.[2]

Background

The Cuban state has developed one of the most successful models of urban agriculture in the world, with government reports declaring astonishing rates of productivity and participation that spans decades.[3] Much has been written about this national system, which supports extensive programming and integrates social, environmental, political, and economic values. Cuba's urban agriculture is known for its enormous

productivity and comprehensive organizational structures: It is perhaps best understood as a series of individual initiatives bundled into a single coordinated effort. Having emerged simultaneously through the spontaneous actions of individuals and the receptive, progressive initiatives of the state, programs developed incrementally during the past thirty years.[4] However, since the beginning of the Special Period in 1991, program goals remain strikingly consistent: to close the gaps in the Cuban diet; to improve food selection, freshness, and quality; and reinforce political notions of independence through local provisioning.[5]

While the history and performance of Cuba's state-run urban farming model is well documented, less has been written about the unplanned aspects of the country's urban agriculture landscapes. Informal design interventions operate as discrete initiatives, widely varied in form, approach, scale, and duration. It is also challenging to pinpoint exactly where state-sponsored efforts stop, and food-provisioning projects become defined instead as exclusively individual endeavors. Moreover, the interplay between formal and informal mechanisms in these unique urban agriculture interventions may account for the overarching successes of unplanned projects. Large state farms, collectives, and private gardens account for the bulk of the produce cultivated in Cuba's urban areas. But the small-scale, informal efforts that augment these enormous state-supported programs help to situate the idea of urban farming more strongly into the collective consciousness, and in so doing, help to position the concept of self-provisioning within social and political revolutionary frameworks (Fig. 16.2).

Fig. 16.2 Onions sold by vendors on the streets of Havana animate urban space with the texture of agriculture. *Photo* Carey Clouse

The Cuban government's flexibility in terms of approach, and willingness to support experimentation and iterative agronomic development is a central feature of the urban farming initiatives that have emerged during the past three decades. Early in the 1990s, urban growers were already self-provisioning, adapting to new needs and opportunities in an effort to weather the country's pervasive food shortages. Government agencies seized upon this energy and interest by creating supportive structures to buoy growers and in the process, launched an island-wide movement. According to scholar Catherine Murphy, "By 1994 a spontaneous decentralized movement of urban residents joined a planned government strategy to create over 8000 city farms in Havana alone."[6] The flexibility espoused by the state in first allowing and then adopting informal agricultural projects may have inadvertently had the effect of amplifying the practice of urban farming on the island.

It is worth noting that although initial urban farming efforts may have been characterized by informality, these projects were rarely cast as wholly unscripted endeavors. Indeed, the government took steps to formalize and codify new practices for food production throughout the 1990s, adopting the work as part of the revolutionary effort. Many of the extemporaneous projects that were successful (such as permaculture experiments, artisanal pest management strategies, or techniques for caring for animals in cities) were subsequently covered by national television and radio shows. Front yard and backyard gardens had all of the physical characteristics of independent informal practice but were registered in government logs early on.[7] The popularity of this improvisational work transformed food security in Cuba, enabling the government to emerge from the crisis period operating one of the most tightly managed, well-organized, and ultimately, productive agricultural systems in the world.[8] Within the broader, coordinated country-wide foodshed, agricultural interventions were documented and supported at every scale, including urban farming. Early Special Period urban food production efforts helped to form a mutually beneficial system of agricultural productivity in Cuba that not only sustained individual participants, but also supported the broader functioning of the government.

The Cuban government's acceptance of a hybrid model for urban agriculture, in which both formal and informal systems operate under a shared mandate to improve food security, characterizes the flexibility of this approach.[9] This system is not only an outlier in the Caribbean, but also distinguishable from the formal urban farming approaches so often showcased in the United States and Europe.[10] Government support of urban agriculture is visible in the extensive support structures meant to assist growers: free, on-call government agronomists, and veterinarians; dispersed centers for subsidized seeds, starts, compost, and tools; and accessible workshops, information centers, and growing clubs. Legal structures, such as the provision of usufruct land for urban gardening, and the inclusion of urban agriculture in the master plan of cities such as Havana, help form the official frameworks needed to authorize urban food production.[11]

However, while the Cuban government actively supports urban farming at all scales across the island, the one-off practices of individuals within this system might be best understood as informal exercises. Designers and planners rarely intervene in modest food production efforts. Because government consent is almost a given, such

Fig. 16.3 Goats tethered on a public soccer field in Havana. *Photo* Carey Clouse
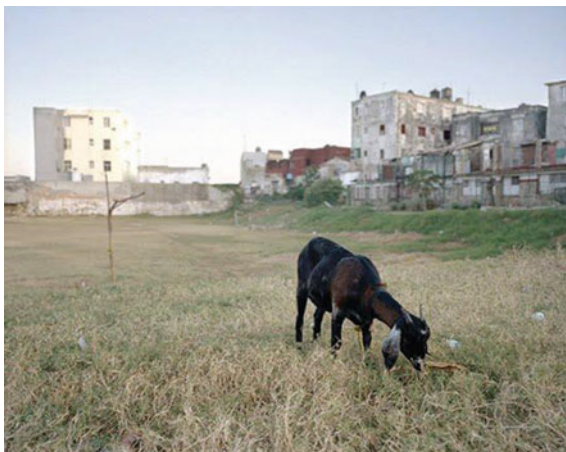
endeavors rarely receive explicit authorization or endorsement.[12] Improvisational projects develop without formal design guidance, and many of these initiatives also materialize in common areas (Fig. 16.3). Moreover, the emergence of urban agriculture in the Cuban commons, whether formal or informal, has helped establish the image of food production as a central component of civic space.

The Commons

The ability to appropriate public lands for food production is a key feature of Cuba's urban agriculture program, and this practice also aligns with the country's socialist political agenda. The very notion of, or possibility for, the collective management of public sites was seeded in the agrarian land-use reforms born out of the *Revolución*.[13] This work gained new traction in 1991 when the *Período Especial* (Special Period in Time of Peace) was launched, and urban farming took on a purposeful role in reducing widespread hunger.[14] Informal efforts to seize the commons for food production through direct action worked, and these methods quickly became sanctioned by the state—standardized, managed, and absorbed into working frameworks for governance. This example stands out as one in which actions by both civilians and the state became accepted and ingrained spatially, to mutualistic effect. The resulting partnership and provisions catalyzed an urban farming movement that remains, albeit in an evolving form, even today.[15]

While the Cuban commons is an exceptional example involving state control, the work of Elinor Ostrom on the management of the commons, and the importance of rules in use, helps to theoretically ground this activity. Ostrom's work highlights individuals' role in monitoring, managing, and ultimately co-producing shared projects

on public sites.[16] While the government may have initially made the commons available to urban farmers in Cuba, Ostrom's articulation of the need to have members of a community collaborate to manage these public spaces highlights the ongoing shared governance structures at play. Indeed, Cuban growers collectively work within tacit and explicit frameworks for expectations of farm management in urban areas. By producing informal urban agriculture in public urban spaces, Cuban growers must have some confidence that others will not undermine their work. The Revolution and Cuba's ongoing state-building project provide a critical shared frame of reference for urban dwellers. Both socialism and Cuban identity have been wrapped up into the goals and values of urban farming, where self-provisioning is also an act of resistance and solidarity. According to Army General Raúl Castro, paraphrased here in English, the project of urban food production is a vital issue for the country's national security, which is equal to preserving Cuba's independence and sovereignty.[17] In this way, the very existence of informal public agriculture projects also entails an essential conviction in communal governance.

There is a distinction between the types of public lands that have been transformed into urban farms in Cuba through usufruct rights—notably the large, valuable, stable development site vis-à-vis the fragmented, leftover, or inconsequential space. Formal state and collaborative farms usually come into being on the former type of development parcel, through a formal land agreement that operates like a long-term lease. Instead, informal efforts might emerge on the latter type of landscape, with or without the express agreement of the state through a usufruct land application. While both types of production spaces may use usufruct land rights and the public commons, informal growing sites consist primarily of underused or unclaimed spaces prior to 1990. Together, these two approaches have effectively transformed the Cuban commons into sites for productive agriculture, with very different physical outcomes.

Although the government may sanction informal food production efforts in the commons, their mundane physical appearance and history enable a certain openness and freedom for spontaneity in both designation and design. This is in part due to its image as an un-managed landscape: Geographer Matthew Gandy suggests that there might be more potential to connect sympathetic growers to sites in just these types of inconsequential landscapes, where the wasteland in cities transcends the rigid boundaries of plot plans and ownership restrictions (Fig. 16.4).[18] Underused and undervalued spaces also provide compelling moral reasons to layer over more productive landscapes. According to Gorgolewski, Komisar, and Nasr, public infrastructures are prime transition spaces for growing, as they "often ha(ve) considerable adjacent wasteland, affording opportunities to integrate the production of food with the spaces provided for energy and transportation."[19] Finally, the grassroots and informal spaces for production in Cuba might be uncelebrated but not insignificant, as they cohere in the public consciousness as a part of the resistance effort.

Fig. 16.4 A vacant lot in Havana is undergoing a transition into food production. *Photo* Carey Clouse

Usufruct Lands

One of the most successful initiatives of the government's post-Special Period agricultural reforms came about in the provision of usufruct land for agricultural use.[20] Usufruct leases allowed Cuban growers to access a vast portfolio of state-owned land parcels, rent-free, claim long-term tenancy rights of 10–25 years, and own crops produced. These landscapes include underperforming sites in cities and towns, such as vacant lots, land adjacent to roads and river corridors, and parcels held for other types of development.

Usufruct land allocation—providing leftover or underused spaces for food production—has enabled the legal appropriation of urban space for food provisioning. Such sites occupy marginal spaces, arguably better tended by farmers than left alone, especially in cities. The process for "checking out" a usufruct parcel is absolutely codified, sanctioned by the government through bureaucratic processes. Yet, once these sites become claimed and developed, they might read as thoroughly informal areas of agricultural productivity. The state-owned lands that urban farms use enable immediate food production but also act as placeholders for potential future development (Fig. 16.5).

Trash/Rubble   Productive Farm   Low-Maintenance Public Space   New Buildings   Park/Green Space

Fig. 16.5 The transition of underproductive land in Cuban cities into foodscapes through usufruct land allocation is a relatively stable land-use phenomenon, but also could be seen as a placeholder for more durable development. *Drawing* Carey Clouse

Improvisation in Urban Spaces: Direct Action Urban Design

Urban design interventions enable people to take control over spaces that they care about, have a measure of input on the shape and form of their cities, protest dominant paradigms, create something fresh, or communicate an idea. Visconti et al. identify space hijacking as more than just the seizure of public or private lands, but instead an opportunity to launch campaigns for the beautification of urban spaces.[21] These types of interventions foster notions of place attachment and perceived ownership, as the individuals who work them stake a claim in a public landscape.

In Cuban cities, initial growing efforts happened organically, and urban agriculture production on public sites may have represented a form of insurgent citizenship.[22] But this work was embraced by the Cuban government, bringing guerilla gardening into the ambit of the state. This move was key to the state's future provisioning successes and represents an alignment between state and individual values. Indeed, early improvisation reflected an overarching interest in producing urban projects for individuals and the common good, an impulse that scholar Gordon Douglas describes as do-it-yourself (DIY) urban design.[23] Like defiant gardening, this form of agricultural engagement is both under-represented in the literature on urban farming and also perceived to be a fringe form of landscape design engagement, despite worldwide interest demonstrated through visible evidence of participation.[24]

Not so in Cuba, where urban agriculture swiftly moved from a fringe undertaking to an authorized and much-lauded civic movement, widely viewed as a vehicle for state progress.[25] When the Cuban government accepted and adopted urban farming into the state's food-provisioning planning, the act of growing vegetables also morphed into a political project, fitting into the broader social, political, and economic frameworks of the revolutionary nationalist agenda.[26] Then, the improvisational use of space became sanctioned as a communal effort in support of shared social and political goals.

Today, Cuban self-provisioning can be considered a political act. In both agitprop and interviews with growers, the fusion of notions of self-sufficiency with ideals of revolutionary independence and solidarity has been clear.[27] This is a part of the larger political project of socialism, in which the small actions of an individual may actually support the group. The state project of building up Cuba's urban gardens carries embedded revolutionary agendas and goals, and is fueled, primarily, by the investment of ordinary citizens.[28]

Informal Food Production

Examples of improvisational urban farming abound in Cuba. However, as expectations, rules, and state-supported programs have shifted during the past three decades, these sites and efforts might also be understood to move along a gradient of convention or formality. For example, street trees, planted in public spaces and managed

Fig. 16.6 Productive urban tree canopies enable foraging in addition to other ecosystem benefits. *Photo* Carey Clouse

by no one, support gleaning. Public parks might host fruit or nut trees planted intentionally to support open access, which might serve as a site for foraging (Fig. 16.6). This canopy becomes an informal, edible backdrop stitched into the fabric of public places.

Another example of informal use of urban space for food production can be seen in the many non-human residents of the cities. Animal husbandry was reincorporated into Cuba's urban fabric during the Special Period, through special laws intended to make animal products more accessible to large urban populations.[29] While allowances for various types of animals have evolved during the past thirty years, animals remain a key component of food-provisioning systems in urban areas. In 2020, urban sites accounted for the production of more than 100,000 tons of animal meat (from pigs, sheep, goats, poultry, and rabbits), 300,000,000 eggs, and 750,000 liters of goat milk in Cuba.[30] Many of these animals are cataloged, recorded, and supported by the state through various animal husbandry programs. However, it is not uncommon to see animals kept in informal and strikingly public ways, as in the free-range street chickens, or goats tethered to street trees and in soccer fields (Fig. 16.7). While the inclusion of animals in cities might have come about through explicit government accommodation, the practice of integrating animals into the fabric of Cuban cities represents a high degree of informality.

The materials and makeup of farming initiatives in Cuban cities is also decidedly informal. Interventions tend to be produced with reused and reclaimed materials, reflecting the extreme material scarcity that has come to characterize the country

Fig. 16.7 A goat grazes along the streets of Havana. *Photo* Carey Clouse

since the collapse of the Soviet Bloc. Garden beds might be made out of old roof tiles or concrete urbanite, reflecting the optimization approaches of growers (Fig. 16.8). Similarly, value-added farm products are often sold in repurposed containers, highlighting the extension of informal approaches beyond garden production into sales and on to Cuban kitchens.

Fig 16.8 Raised beds can be made from materials that have been found or repurposed, signaling informal acquisition, and planning strategies. *Photo* Carey Clouse

Design

In Cuba, informal gardening efforts influence the shape and form of urban space without adhering to strict aesthetic protocols for land use. The communal stewardship of productive landscapes is itself a land use, occurring at a wide variety of strategic urban sites throughout Cuba. However, the scale and siting of urban growing interventions signal the broad acceptance of informality. These practices vary in terms of site-specificity, ranging from the aggregated gardens of various farming clubs to the individual goat tethered daily to an ever-changing landscape. In addition to the underused lots, parks, and other "marginal" spaces of Cuban cities, informal growing interventions also occur along roads, in medians, and across other types of formal infrastructure held in the public domain. The popularity of this effort, and the many creative design approaches employed, demonstrate that there are compelling reasons for user-initiated interventions at various scales.

Urban agriculture exemplifies notions of hybridity: In the case of Cuba, it is a merging of informal and formal space allocation and uses encompassing both public landscape planning and the more utilitarian response to the food crisis. This duality reinforces ideals of civic duty and solidarity, suggesting that urban agriculture is both a political project as well as a more straightforward mode of food production.[31] Cuban growing efforts mirror the same impulses and outcomes that landscape architect Kenneth Helphand outlined in his research on defiant gardens.[32] In wartime growing spaces, he notes that "there is a surprising inventiveness, a resourcefulness in design and function, in formal arrangement, in the gathering, appropriation and use of materials."[33] Urban growing sites tend to be opportunistic in terms of location, materials, and resources, and their impermanence in this domain makes a case for lightweight interventions in terms of overall investment and resource allocation.

The genesis and development of urban farming in Cuba explain much of their informal nature.[34] Cuba remains a country with limited import and production capacity, which makes it difficult to source new products for urban farming infrastructure. Handmade signage, repurposed materials used in fencing and raised bed construction, and DIY shade structures remain commonplace. Various levels of informality might characterize urban farms in terms of their organization and physical expression. Still, the vast majority of the gardens in Cuba today remain functional and unromantic spaces, focusing on food production rather than visual effect.

Because growing food in cities came about through the food crisis, it is no surprise that few architects or landscape architects were involved in planning Cuba's earliest growing efforts. Today urban planners have been more active in urban farming initiatives in Cuba than any other design professional.[35] But the form and aesthetic of the Cuban garden is ultimately one of DIY urbanism, appropriation of space, and lack of regulation. The spaces may be codified by local and national government entities and supported by the state apparatus, but they tell a story of self-provisioning. Designers have an ability, if not a professional duty, to participate in developing food-provisioning efforts at the urban scale. Design professionals might provide unique knowledge about appropriate plantings for climate and soil, or expertise regarding

the broader implications of maintenance, safety, ecological concerns, and long-term management. Cuban designers also can help to plan for transitions in use, helping neighborhoods to adapt over time.

Opportunities and Limitations

To invite agricultural processes into urban areas is to animate cities with new forms of life. In Cuba, the food production efforts of the 1990s were characterized by the superficial application of urban farming activities onto underused landscapes in an efficient, if uncoordinated way. This work became increasingly integrated into both the urban fabric and state rhetoric, helping to situate the project of urban agriculture in the Cuban context. Today, the state boasts three decades of experience with urban farming, visible in the skillful and ingenious programs underway.[36]

But the design and physical character of Cuban gardens is still surprisingly straightforward, handmade, and low-tech.[37] Informality is signaled by the materials used to construct gardens, the location of these gardens, and the maintenance regimes associated with these spaces. It is possible that the fusion of agriculture and urban space only requires theoretical and social frameworks, rather than more explicit formal plans. In Cuba, the country's acceptance of urban farming and investment in this work over time suggests that it is a practice that has staying power, despite informal modes of management.

However, designers and planners might begin to imagine a Cuban future that binds food production to urban life in more tactical and concrete ways. In a city where street trees are slated for planting, might fruit or nut trees stand in? If public soccer fields need mowing, could a tethered goat be viewed as a vital actor in the ongoing performance of that place? Municipal parks and civic buildings could become hosts for informal agricultural projects and many of them already do. To grow in scope and scale, agriculture must be acknowledged as a vital part of the city—and in so doing, perhaps the physical conception of urban farming will evolve as well.

The tension between informal modes of farming and formal cityscapes is highlighted when things do not go well. There can be friction in the cohabitation of plants, animals, and people, especially when goals and needs differ. Urban manufacturing processes emit pollution, which too often impacts the water and soil used for food production. Urban livestock brings about particular acoustic, olfactory, and spatial challenges. In 2002, Fidel Castro issued a ban on pigs in Havana, due to clashes between the needs of urban residents, animal owners, and the state's hygiene plans.[38] In the past twenty years, new designs, research, and ultimately state directives have made space for animals such as pigs, goats, sheep, rabbits, and poultry.[39] The Cuban model for urban agriculture suggests that problems might be met with new synergies and creative work-arounds. After all, Cubans have been actively adjusting this

system for more than thirty years: Just like the rest of its socialist agenda, it is an ongoing project of becoming.

Cuban Futures

Cuban cities now boast some of the most robust urban growing initiatives in the world, honed over decades and buoyed by state-sponsored research, funding, and incentives. This work was fueled by widespread public interest in self-provisioning, which was born out of necessity but gradually morphed into a cultural, social, and political project. Cuba stands out as a pioneer in urban agriculture programming, and the state support, framing, and logistical efforts must be acknowledged as central to the country's food-provisioning model. At the same time, the government's willingness to allow this work to unfold organically, by learning from the informal, ground-up efforts of individuals and then by removing obstacles so that these efforts could thrive, is a key part of this success. This is a fundamentally different model than either a hands-off or well-organized approach; it reflects an attitude of accommodation, characterized by hybridity and spontaneity.

The severe food crisis of the early 1990s is no longer a significant threat, largely because of the creative provisioning strategies that emerged in agricultural sectors.[40] At the same time, international trade has opened incrementally during this period, easing the pressure that was created by the collapse of the Soviet Bloc. Today Cuba imports approximately 1.6 billion USD worth of food products from other countries.[38] If this trend continues, the future of Cuba's informal urban growing efforts may depend, ultimately, on the image of local agricultural production in the popular consciousness.

Cuban urban farming features strong state support and ideological framing, with broad civic buy-in. The informal nature of many gardens and farms, and the widespread absence of physical planning or design, suggests that food security can succeed without aesthetic scripting. There is utility, efficiency, and freedom of authorship gained from informality. This does not mean that designers cannot advocate for urban agriculture or are viewed as undesirable collaborators. But the acceptance of informality, characteristic of the country's urban provisioning movement, suggests that design is not strictly necessary. Instead, DIY growers might be recognized as a powerful shaping force for the aesthetics of urban farms, offering their wisdom, interests, and experience to the state project.

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Chapter 17
Urban Permeability in Medellín: Case Studies of Santo Domingo Savio and El Poblado

Felipe Mesa

Abstract This chapter considers the concept of "permeability" to offer an interpretation of Medellín's urban and social transformation that took place during the last few decades. Permeability is understood as a gradient which fluctuates between the hermetic and the porous. It is expressed in the city's architectural, environmental, and social infrastructure. With its tropical climate, mountainous topography, and deeply inequitable society, Medellín has become an assemblage of contrastingly different urban zones. The north features the self-built, working-class informal neighborhoods, while in the south, there are high-class areas with tall, free-standing buildings. Separating both zones are middle-class neighborhoods with mid-rise buildings. An analytical comparison of these urban and social zones in relation to permeability allows us to evaluate the intense transformation processes that this city has been experiencing.

Keywords Medellin · Urban zones · Inequity · Informality · Urban transformation

On the eastern slopes of Medellín, there are two very different examples of urban growth. The northern part of the city is a self-organizing phenomenon, consisting of two neighborhoods, Santo Domingo Savio 1 and 2, that are part of Zone 1 (or Barrio Popular), and host an important portion of the working class. The second example, to the south, is a phenomenon of expansion through a process of real estate speculation, which comprises a luxury bubble. This hub is formed by neighborhoods including El Tesoro, Los Balsos, or San Lucas, which belong to Zone 14 (El Poblado), home to the higher-income classes. Both urban growth processes are associated with circumstances of violence (rural and urban guerrillas, drug dealing, and paramilitaries) that reveal the inequity and gaps between human groups living in Medellín.[1] Those neighborhoods are located on the same slope and show opposite degrees of social and urban permeability.

Santo Domingo Savio 1 and 2 are self-built neighborhoods whose houses were incrementally consolidated. In these neighborhoods, building conditions have

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Fig. 17.1 Neighborhoods on the northeastern slope of Medellín. Zone 1 (Popular). *Photo* Alejandro Arango

improved with time, while engagement with regularization processes, such as obtaining public services, has been gradual. There are few conventional streets, though there is an extensive network of passages and connecting trails. Every block is split into irregular plots that connect to the street; its irregularities are determined by the changing slope with its demands for nooks, bridges, and stairs. Consequently, every area has a variable number of access points and perforations (Fig. 17.1).

These northern neighborhoods are complex, three-dimensional configurations that articulate growth on three levels distributed across terraces, balconies, and roofs. This architecture exists in a constant state of transformation. It is never finished and remains open to change and expansion. The clearest example of such a concept is the diverse use of concrete slab roofs. Besides being terraces with the potential for future construction—such as the future home of a child—they are used to hand-dry clothes, grow plants, keep pets, throw family parties, and other uses. Nevertheless, extreme poverty and spatial and financial limitations trigger severe social problems. Nevertheless, solidarity and cohesion among neighbors makes survival possible, enabled by the constant contact between people on the street, or in a more general way, through intensive use of public space.

The diversity in Santo Domingo 1 and 2 is expressed in urban and material terms. Broad aesthetics allow for a heterogeneous use of materials, finishes, and veneers. For example, plaster can be jagged or smooth, with circular depressions or different textures; veneers include stone, ceramics, and metal. Color tones range from pastel to neon and are freely combined. Social inequity and marginalization triggered the

Fig. 17.2   Santo Domingo Savio neighborhood. Zone 1 (Popular). *Photo* Alejandro Arango

conditions for the emergence of gangs in Santo Domingo, where they earned a living from drug and weapon trafficking. Supporting this situation were the permeability of the neighborhood and the possibility of escaping through many different routes. Despite the high physical porosity, invisible barriers arose that are hard to dissolve.[2] There, permeability created delicate and vulnerable qualities (Fig. 17.2).

In Zone 1 (Popular), state presence has increased over the last two decades. The Plan Urbano Integral (PUI, or Integral Urban Plan) includes public transportation systems (cable cars), new cultural and educational buildings (España Library, Santo Domingo Kindergarten, and Santo Domingo School), a system of public spaces, and sports facilities. Under this framework, existing houses were improved and new ones built with a social work background founded on expanding education and labor opportunities for vulnerable communities.

Today, the southern part of the eastern slope that constitutes a significant portion of El Poblado remained a rural area distant from the city for over two centuries. Little by little, cottages became recreational houses and later country house suburbs. Starting in the 1970s, the area experienced a rapid transformation process, with private developers building high-rise buildings surrounded by fences and surveillance booths. These buildings, retracted from the perimeter, constitute, at least in part, the idea of luxury and fine living currently promoted in Medellín. This kind of suburb was encouraged by the violence brought about by drug dealing. However, it is also a local interpretation of the same anxieties that triggered the US suburb–a fear of poverty and difference (Fig. 17.3).

Fig. 17.3 Neighborhoods on the northeastern slope of Medellín. Zone 14 (El Poblado). *Photo* Alejandro Arango

In the southern neighborhoods, gardens, pools, and some minor buildings are placed between the enclosing fence and tall buildings. A surveillance booth constitutes the only contact point with the outside. Shared areas within the residential development lack the urban vitality distinctive of public spaces; therefore, social relations are postponed for the shopping mall.

The repetition of this construction model (free-standing high-rise building and fence) in El Poblado, mixed with a large amount of native vegetation, consolidates a vast but impracticable garden city. Curiously enough, an increasing emphasis on ecology-oriented discourse is part of the advertising strategy of real estate agencies. This only makes ecological problems even more evident including high consumption of fossil fuels, rare use of public transportation, an outrageous expansion of the city, and air pollution.

The building materials in El Poblado are mostly high-quality and homogeneous, echoing its population homogeneity. Most buildings feature red brick exteriors and white plastered interiors. The design intends to resist wear and avoid changes. Significant transformations are not allowed, nor material variations or individual expressions. Even hanging clothes to dry on balconies is considered a violation of the community standards. A transformation of these neighborhoods would require a massive removal of fences, a subdivision of interior spaces, and the re-qualification of facades to allow for a greater diversity of communities. These are all necessary actions that could lead to closing the city's social gap (Fig. 17.4).

Fig. 17.4 El Tesoro neighborhood. Zone 14 (El Poblado). *Photo* Alejandro Arango

The fear of violence and an interest in consolidating an educated and productive group, set apart from problems and social dispute, leads inhabitants of El Poblado to live a segregated life within a well-demarcated neighborhood. The impermeability of the neighborhoods within zone 14 contributes to urban violence in Medellín. However, a phenomenon that contradicts this statement emerges—the multitudinous use of the bike path on El Poblado Avenue. This avenue is exclusively available for pedestrians and cyclists on Sunday mornings, connecting with other bike paths in the city. Inhabitants flock to the area, provoking a massive phenomenon of social and urban permeability.

Both the sectors of El Poblado in the South and Santo Domingo in the North are integrated through consolidated urban networks. Medellín's downtown joins the neighborhoods on the northeastern slope with the rest of the city. Some neighborhoods in the lower part of El Poblado, such as Patio Bonito or Manila, bring the city closer to the river. Although Medellín can only be walked in a partial and fragmented way, the neighborhoods of the flat portion of the valley (Laureles, El Estadio, Conquistadores, Santa Monica, La América, etc.) have the necessary urban conditions and infrastructure to function like a traditional and consolidated city: closed blocks, sidewalks, parks, good public transportation systems, cycle paths, etc. It is precisely in this area that a middle-income population with greater social diversity is located (Fig. 17.5).

Small fragments that are similar to the urban fabric of Santo Domingo have emerged and survived inside El Poblado and its model of isolated towers. Some workers, or domestic service employees, built small neighborhoods in restricted

Fig. 17.5 Central and flat zone of the Aburrá Valley. *Photo* Alejandro Arango

areas, almost always close to streams and on marginal sites. The municipality gradually legalizes and incorporates the settlements into the "formal" city. As a result, neighborhoods like El Garabato or El Chispero behave like permeable islands and open urban configurations within the hermetic fabric of the town. Their urban vitality is evident in the corner shops, irregular balconies, native vegetation, small parks, streets, and paths. Although they have resisted, the pressure of the value of the land and new road planning will surely make them disappear to make room for new, free-standing housing towers.

Some residential buildings of up to eight stories have been built in the lower part of Santo Domingo. Like the tall buildings of El Poblado, these new constructions create a more compact and isolated street life. Although they are islands joined with the neighborhood on the ground floor that stand out from a distance, they still appear out of context with an organic urban fabric and its wide diversity of dwellings, geometries, and ways of living. These new types of apartment buildings, with small spaces, windows, and balconies, seem to reduce the diversity of options provided by the existing urban fabric. Moreover, they are an option linked to public social housing policies and new real estate speculations.

During the first two decades of the twenty-first century, the urban development of Medellín was characterized by the construction of formal projects within the informal city such as new hillside public transport systems, libraries, kindergartens, schools, public spaces, parks, and police stations.[3] Some of those urban experiments now resonate as potential projects for the formal city and some neighborhoods in El Poblado. A metro-cable connects the upper areas with the main subway line that

Fig. 17.6 Los Conquistadores Neighborhood next to the Medellín River. *Photo* Alejandro Arango

runs from north to south, public parks are placed on the hillside in the middle of the closed urban fabric, while a new public library encourages educational and cultural activities in a sector characterized by shopping centers and a lack of public spaces.

The segregated and inequitable city of Medellín, with its central middle-class neighborhoods, its low-income neighborhoods on the northern mountains, and its upper-class neighborhoods on the southern slopes, has begun to mix. It shares problems and urban strategies, creating the opportunity for a more heterogeneous and plural city.[4] The effort to incorporate the neighborhoods on the slopes and suburbs into the rest of the city will also imply an urgent re-densification of the neighborhoods in the flat areas, which would prevent urban expansion, making it more permeable and sustainable over time (Fig. 17.6).

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Chapter 18
Hopeful Rebar: Speculating on Urban Informality in Mexico City

Gregory Marinic and Pablo Meninato

Abstract Although informal urbanism has existed throughout human history, only in recent years have practicing architects and urban designers begun to critically examine its complexities and potentialities. There is an emerging discourse surrounding informality that blends academia with participatory design and professional practice across Latin America and the US–Mexico Borderlands. This chapter presents an academic design studio that sought a renewed understanding of design in relation to the informal city by asking: *A city, by and for whom?* This question informed a conversation on social justice through mechanisms pointed toward improving the daily lives and futures of marginalized people. The study offers an example of how studio-based pedagogies can better prepare future architects and urban designers for practices that advocate for rights to the city. It focuses on work produced in a graduate architecture and urban design studio based in the San Miguel Teotongo informal settlement of Mexico City with proposals conceived through participatory frameworks and self-building.

Keywords Mexico City · Informal settlement · Architecture · Urban design · Studio pedagogy · Participatory

Although informal urbanism has existed throughout human history, only in recent years have practicing architects and urban designers begun to critically examine its complexities and potentialities. There is an emerging discourse surrounding informality that blends academia with participatory design and professional practice across Latin America and the US–Mexico Borderlands. The design practices of Jorge Jáuregui, Flavio Janches, Tatiana Bilbao, Teddy Cruz, and Fonna Forman are

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examples of this modus operandi. These architects test their socio-spatial theories through teaching and research pursued within university frameworks. In Argentina, Jáuregui develops projects through his urban design workshops in the Faculty of Architecture at National University of Rosario and the Federal University of Rio de Janeiro, while Janches began his research on informal settlements as a professor in the Faculty of Architecture and Urbanism (FADU) at the University of Buenos Aires. In Mexico, Bilbao applies her studio-based advocacy in US universities through built affordable housing projects in Mexico City. In California, Cruz and Forman test their theories in the "Cross-Border Initiative" at the University of California-San Diego where they document and analyze urban growth and spatial morphologies along the US–Mexico border.

Although Jáuregui, Janches, Bilbao, Cruz, and Forman practice in notably different national, cultural, socioeconomic, and contexts, they collectively respond to alternative provocations—liminalities, fractures, borderlands—that embrace the imperfections of the informal city. Their practices have rejected modernist norms to pursue more nuanced and participatory forms of architecture and urban design. Viewed as a collective body of work, their projects embrace collaborative frameworks to upgrade informal settlements and low-income neighborhoods through participatory interventions linked to academic pedagogies. Like Jáuregui, Janches, Bilbao, Cruz, and Forman, we believe that architecture and urban design educators should more proactively situate themselves and their students in this global call to social justice. Working in a similar manner, we routinely apply and advance our ongoing research on informal urbanization within the architecture and urban design studios that we teach. Our design studios at the University of Cincinnati and Temple University seek a renewed understanding of architecture and urban design in relation to the informal city by asking: A city, by and for whom? This question continually informs a conversation on social justice through mechanisms pointed toward improving the daily lives and futures of marginalized people. This chapter offers an example of how studio-based pedagogies can better prepare future architects, urban designers, and planners for practices that advocate for rights to the city. It focuses on a graduate architecture and urban design studio at the University of Cincinnati based in the San Miguel Teotongo informal settlement of Mexico City that explored participatory frameworks and self-building.

Hopeful Rebar

Coined early in the semester by our studio as its guiding ethos, the notion of 'hopeful rebar' honors the aspirations of the countless self-builders who make, inhabit, and steward informal settlements. Hopeful rebar refers to the structural rebar that often protrudes from the tops of partially built homes–rebar that one day aspires to accommodate new construction. Committed to the cause of hopeful rebar, our students analyzed existing geographic, socio-economic, urban, and architectural conditions

of Mexico City by asking several questions: How did rural poverty fuel the development of these settlements? How does the informal land consolidation process result in non-traditional housing and infrastructure? How do communal lands with fragile ecological conditions serve as territorial reserves for irregular settlements? Is there an inherent logic that governs the growth of informal urbanization? And ultimately, how can architects more effectively collaborate with stakeholders to advocate for improvements in quality of life?

Among the many disciplines that engage informality, two general fields can be identified: on the one hand, those scholars who seek to understand the physical, social, political, geographical, ecological, and cultural realities of settlements such as sociologists, geographers, anthropologists, social workers, and psychologists, and on the other hand, those theorists and practitioners who concentrate on the transformation of the built environment—primarily but not exclusively—within the disciplines of architecture, planning, urban design, and landscape architecture. Both perspectives were blended in this academic design studio to seek authentically transdisciplinary ways of seeing, thinking, and working.

The active participation of urban scholars and practicing architects framed a discourse surrounding informal urbanism, while graduate students of architecture and urban design demonstrated the ways in which contemporary architects, planners, and urban designers in Mexico respond to informality through community-based experimentation. Our pedagogy responded to alternative architectural provocations—liminalities, fractures, latencies, indeterminacies—embracing the imperfections of the informal city in its scholarship and design practices. Working collaboratively and individually, students developed self-build housing and urban design projects traversing the histories and theories of informal urbanism with themes including, but not limited to, globalization, post-colonialism, transnationalism, incrementalism, organicism, the readymade, social justice, and the Anthropocene. Lessons gleaned from the informal settlements of Mexico City can be translated worldwide.

This studio investigated the relationship between the historical socioeconomic conditions of Mexico and the establishment of informal settlements on the periphery of the Federal District. Our in-person studio was cut short in March 2020 by the COVID-19 shutdown. Thus, the provocation for hopeful rebar emerged during a particularly critical moment in human history. The devastating effects of the pandemic continue to be felt around the world, while a growing segment of the global population is being driven below the poverty line. Furthermore, the United States and Mexico—the transnational milieu of this project—remain among the hardest hit countries by the COVID-19 pandemic.

There are some signs of optimism in this discouraging moment for global humankind. Several effective vaccines against COVID-19 has allowed us to return to a new, semi-normalcy. Furthermore, there are hopeful signs in the presidency of Joseph Biden who succeeds the strongly authoritarian tendencies of the Donald Trump administration. Its last anti-democratic attempt was the partial seizure of the US Capitol Building on January 6, 2021 which left a toll of five dead and the country—and the world—in collective shock.

Regarding the geographic dynamic of this studio, it is important to note that Trump's first campaign gesture was to encourage a racist and discriminatory rhetoric that cast "Mexicans" as "drug dealers and rapists," and thus to actively flame the xenophobic and white supremacist instincts of many Americans. One of Trump's central promises, later turned into a campaign slogan, was "building the wall" on the US–Mexico border. The mere notion of attempting to solve an international border problem by physically dividing territory harks back to medieval times. In contrast to such actions, the world has, in recent decades, tended to integrate and connect whereby concepts of country, culture, and territory appear increasingly fluid. Global trade, the Internet, and social media show that the world is—to use Thomas Friedman's expression—increasingly flat. Indeed, the COVID-19 pandemic has undoubtedly confirmed that viruses and diseases do not recognize national borders.

The US–Mexico border is where the contrast between the Global North and the Global South is perhaps best evidenced. If this geographic divide seems somewhat arbitrary, it nevertheless compels a reassessment of a current world order that is undeniably biased and unjust. It is essential to challenge this longstanding binary diagnosis—the economic and technological advancement of the Global North does not translate into artistic and cultural superiority. The students and professors from the University of Cincinnati who visited Mexico City in February 2020 immediately became aware of the immense socio-spatial richness of Latin America. The ancient and colonial past of Mexico is physically manifested in high-quality urban spaces, architecture, historic districts, and imposing archaeological sites. Even so, this immense historical heritage should not distract from the extraordinary originality of Mexican modernism—from the magnificent artworks of Frida Kahlo, Diego Rivera, and David Siqueiros; to the avant-garde architectural icons of Teodoro González de León, Luis Barragán, and Ricardo Legorreta; to the universal prose of Carlos Fuentes and Octavio Paz. During our studio, these aspects of material culture confronted and undermined the xenophobic rhetoric of then President Donald Trump, while students interacted with Mexico through field-based acts of making (Fig. 18.1).

It was Mexican thinker Octavio Paz who best described the complex and contradictory impact of modernism on Mexican culture. He noted that its ancestral traditions emerge mostly within a young population, that the local coexists with the universal, and that the past converges with the future. "In this pilgrimage, in search of modernity," Paz reflects, "I lost my way at many points only to find myself again. I returned to the source and discovered that modernity is not outside, but within us. It is today and the most ancient antiquity; it is tomorrow and the beginning of the world; it is a thousand years old and yet newborn."[1] Paz's call to reassess modernity, and its relationship to the past and present, guided our efforts to explore an architecture of today that learns from the timeless flows of Mexican culture and informality.

Fig. 18.1 *CDMX Assemblage. Author* Shelby Leshnak

The *Informal Cities* **Field Studio**

Mexico City ranks among the largest metropolitan regions in the world, as the 8th richest in the world which produces approximately 22% of the national GDP of Mexico. Although Mexico City is the national capital of a country designated "upper middle-income" by the World Bank and International Monetary Fund, this formal categorization belies the fact that poverty is rampant throughout Mexico, particularly in its federal megalopolis. On the one hand, a large economy, global cultural influence, and steady democratization make Mexico a regional and middle power. On the other hand, the built environment of the country is roughly 50% informally urbanized. For example, the sprawling Neza-Chalco-Itza municipality on the eastern periphery of Mexico City—with an estimated population of over 4 million inhabitants—represents the largest slum on Earth.

Using Mexico City as an urban laboratory, this international architecture-urbanism studio was an endeavor of the graduate architecture program of the University of Cincinnati School of Architecture and Interior Design and its URBANIA grant-funded research laboratory. Our studio is the inaugural project of the *Informal Cities* series focused on human habitation and well-being in relation to informal urbanism. Its pedagogy was framed through urban theory and applied field research with a special focus on sustainability and self-build materiality. This framework encouraged trans-territorial awareness, effective communication, critical thinking, information literacy, knowledge integration, and social responsibility.

The studio was structured with two simultaneous objectives: firstly, to learn about Mexico City, to understand its culture, geography, urban and architectural trends through personal interactions; and to appreciate its rich artistic heritage and architectural legacy. In this sense, our on-site encounters with world renowned architects and thinkers, such as Tatiana Bilbao, Miquel Adrià, and Víctor Legorreta were of critical importance. Our field research in San Miguel Teotongo—walking its streets, plazas, parks, and markets—enabled us to interact with the proud and diverse citizens of this unique community. Secondly, immersed within local conditions, the studio worked in the manner of a professional design practice to produce architectural, urban design, landscape, and infrastructural interventions for San Miguel Teotongo. The projects presented herein, apart from their formal and aesthetic aspects, should be interpreted as responses to the needs of the most vulnerable people in the community. This stance embodies a paradigm shift that has become increasingly evident in schools of architecture and design, in which the project is intentionally oriented toward social justice.

Prior to the studio, we identified a series of interconnected sites in the San Miguel Teotongo informal settlement of Iztapalapa for urban design and housing interventions. Each student was tasked with developing an urban design proposal in the form of a plaza, park, and/or street corridor, including deployable street retail kiosks and self-build housing. Students began their research by documenting and analyzing the Mexico City metropolitan area, the San Miguel Teotongo settlement, and their individual sites. This process included urban mapping, cultural studies, field photography, collage-making, diagramming, and technical documentation of building exteriors, site plans, and site sections, as well as hydrological, geological, and ecological analyses. Working collaboratively and individually, our students in the United States traveled to Mexico City for fieldwork accompanied by a group of scholars, architects, and urban designers.

On-site in Mexico, students were encouraged to critique conventional urbanism and affordable housing from the ground-up, to reconsider the role of the architect in this process, to connect architecture with urban design strategies, to advocate for social well-being, and to address the UN Sustainable Development Goals for socio-ecological performance. Their field research was further enhanced and supported by PhD students in Architecture and Urban Planning completing the teaching practicum requirement. Students returned to the University of Cincinnati just before the COVID-19 shutdown in March 2020 to continue developing their projects.

The learning objectives of an international design studio are dimensionally rich in new awareness that collectively emerges. Students challenged conventional design thinking processes by privileging the conceptual and schematic design phases toward community-oriented design and those in most need. Our pedagogy didactically engaged students in a large-scale, international project with urban, architectural, and interior aspects. Students applied multidimensional theoretical, conceptual, and field research to propose a design solution. They identified, analyzed, and synthesized complex programming information in an international context. They engaged in low-tech sustainability, while advocating for quality of life improvements through self-build housing and urban design. Their design responses intersect with the histories and theories of informal urbanism lensed by globalization, post-colonialism, transnationalism, incrementalism, organicism, the readymade, social justice, and the Anthropocene. The following projects were designed by students Brandon Kroger, DaMario Walker-Brown, Todd Funkhouser, and Robert Peebles. Their work represents a range of strategies developed in this studio.

Tierra Perdida | *Brandon Kroger*

Tierra Perdida is composed of the Plaza Violeta and Cooperativa Los Alamos housing co-op situated on the south side of San Miguel Teotongo along the northern slope of Tetlalmanche Volcano (Fig. 18.2). The concept advocates for agency, autonomy, and the ability to self-construct physical, social, and economic space to suit one's needs. Brandon Kroger began his project by asking: How can architects and planners develop ways to solve housing insecurity, yet maintain the critical agency, and maintain the dignity of independence for the people who live here? This project focused on a *terrain vague* that was renamed Plaza Violeta in homage to its geographic location within San Miguel Teotongo.

Kroger met with residents to understand their needs and then addressed their concerns for crime, lack of green space, water management, and improved aesthetics. His project reappropriated indeterminate spaces to create a public plaza and cooperative housing. The urban design component, Plaza Violeta, curates existing trees and plantings, while removing overgrown brush to open the space to more daylight. Material cues for the plaza respond to the surrounding natural landscape. Permeable paving creates semi-hardscapes for market kiosks, while green spaces afford areas for relaxation. A new public platform offers views of the valley, while simultaneously controlling erosion and enhancing water management. Indoor–outdoor space below the platform provides a sheltered space for informal markets, meetups, and gatherings.

The housing component, Cooperativa Los Alamos, was conceptualized as a co-housing architectural hybrid that applies a set of formal rules and informal variables to new housing (Fig. 18.3). Its form helps to shape the northern edge of the reconceived Plaza Violeta. The concept offers an adaptable and variable housing model that may be used on *terrain vague* sites or open lots. Here, the architect/planner/developer takes

Fig. 18.2 *Plaza Violeta. Author* Brandon Kroger

on a *shared* role with citizens of the territory, protecting their agency as self-builders, while simultaneously developing a practical and customizable system for building. It redeploys building methods found within the neighborhood, such as concrete and brick hybrid structures. This design stacks chamfered concrete plates and concrete columns with brick infill walls. Exposed surfaces are covered with stucco, a common construction technique used throughout Mexico. Windows and prefabricated structural elements are designed by the architect, while residents contribute to the process by incrementally planning and constructing their homes according to their own needs.

Fig. 18.3 *Cooperativa Los Alamos Housing. Author* Brandon Kroger

Degrees of Informality | *Todd Funkhouser*

The urban sprawl of Mexico City extends from the city center to the metropolitan periphery where it is mostly composed of informal settlements. These communities incrementally formed as groups of rural people migrated to Mexico City where they collectively appropriated unclaimed land. Built without municipal water, sewage, or electrical systems, these settlements have been slowly formalized. Municipal governments of Mexico City and the local boroughs began to incorporate these areas with paved roads, sidewalks, schools, and new infrastructure.

Designed by Todd Funkhouser, this project addresses aspects of the built environment that remain in need of improvement. It consists of urban design interventions including streetscape upgrades to a primary commercial-residential corridor, a new public park, and incremental improvements to existing housing stock. The new corridor, Paseo de Las Petunias, pedestrianizes a steep street, introduces water management infrastructure, and connects to an isolated area on the eastern flank of the settlement centered on a renewed Plaza Providencia. A new public park, Parque Central, incorporates performative aspects including a reservoir, water filtration facility, and community gardens (Fig. 18.4). Improvements to the commercial–residential corridor and parks enhance walkability and access to formalized greenspace (Fig. 18.5). Together, these features aim to connect two isolated peninsular communities by creating a safe, walkable, green, and vibrant public space between them.

Fig. 18.4 *Parque Central and surroundings. Author* Todd Funkhouser

Funkhouser's housing concept responds to recent government-sponsored affordable housing projects consisting of uniform and monotonous single-family houses. These tabula rasa master-planned communities are intentionally walled off from adjacent informal settlements where access is restricted via gates and dead-end streets. These enclaves form isolated islands with highly restricted commercial activities. Many feature homes with postmodern design elements such as gable roofs. Vertical additions are not allowed with specific restrictions that forbid using rooftops as living space.

Unlike informal settlements, this lack of customization diminishes the ability for residents to self-build, and with it, their sense of individual agency and collective ownership of the public realm. In response, Funkhouser's proposal employs a kit-of-parts approach to incremental housing and public infrastructure that supplements the current way of life in San Miguel Teotongo. Intentionally designed self-building
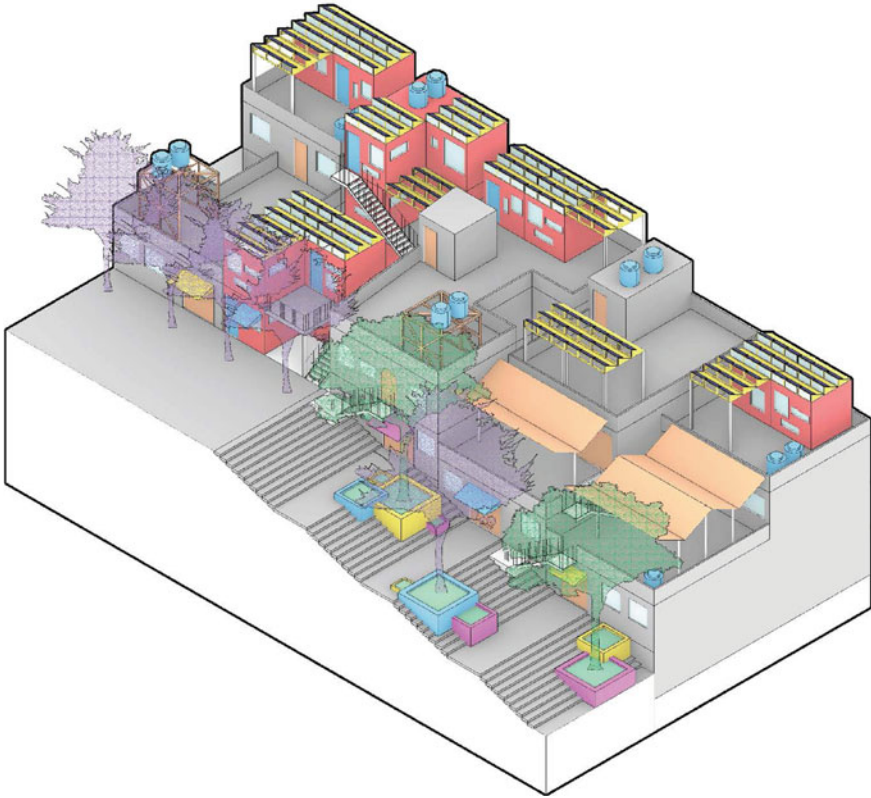
Fig. 18.5 *Parque Central* (axonometric). *Author* Todd Funkhouser

techniques support in situ housing expansion that modifies vernacular buildings by allowing for more light, better air circulation, and increased customization.

Paseo de las Estrellitas | *DaMario Walker-Brown*

This proposal for central San Miguel Teotongo seeks to enhance the way of life in the neighborhood without imposing unwanted influences or fueling gentrification. Designed by DaMario Walker-Brown, this concept for Paseo de las Estrellitas encourages continued use of existing infrastructure near the public market, while introducing novel ways to reuse various cast-off materials. The idea is shaped around the notion of salvaging cast-off things to create spaces that foster greater social interaction and economic resilience.

In this design, the city block of Las Estrellitas closest to the public market is transformed into a pedestrianized street affording area residents and established vendors

Fig. 18.6 *Paseo de las Estrellitas. Author* DaMario Walker-Brown

space for pop-up markets (Fig. 18.6). Pedestrianization of the new Paseo de Las Estrellitas would also enhance foot traffic to existing ground-level market stalls, storefront shops, and a new aerial cable tram station. The main interventions include a mobile library and scaffolded pop-up theater to infill vacant lots along the corridor. Smaller interventions would repurpose tires to plant gardens and reuse bed mattress springs to build a mobile clinic for COVID-19 pandemic outreach. The streetscape concept intends to intervene lightly, allowing residents to rethink how to use latent and accessible materials. It envisions self-built forms of architecture and urban design that encourage participatory place-making.

Walker-Brown's housing concept for the Paseo de las Estrellitas corridor provides land for families on which to build storefront businesses first, with the option to add a multi-story residence later. This process would begin by encouraging residents to establish a family-owned store that would help fund their housing expenses. Once the family builds income from their business, they can begin building their own house above the store. This project applies learning from informal building approaches by identifying, repurposing, and re-introducing found objects into intentional construction. Cast-off tires, pallets, doors, windows, washing machines, and other everyday discarded items would be reused to build walls, apertures, façade treatments, and even water management infrastructure (Fig. 18.7). Overall, this concept builds upon existing construction methods as a basis for building housing. At the same time, it catalyzes self-building through new techniques and alternative materials. The concept advocates for ecology and low-tech design by finding new ways to reuse cast-off items typically destined for the landfill.

Fig. 18.7 *Paseo de las Estrellitas* (axonometric). *Author* DaMario Walker-Brown

Constructing Community | *Robert Peebles*

Parque Jazmin, a forested site with dramatic topography, lies close to the San Miguel Teotongo Market and is the terminal stop for bus lines that ferry people from the informal settlement to distant Metro stations. Parque Jazmin formed the geographic center of all sites in our studio. As a connective piece of the urban fabric, the existing park performs poorly. A stair running through its middle drops pedestrians onto a dead-end street, while adjacent roads at the top of the park remain inaccessible due to a significant sectional change. These conditions became key catalysts for this intervention.

Designed by Robert Peebles, this proposal increases transit links to the heart of San Miguel Teotongo, while creating interconnected pathways that navigate the terrain between the other sites in the neighborhood (Fig. 18.8). Using a pre-existing yet empty, public-scale platform behind the Capilla de Nuestra Señora de Guadalupe, an aerial cable tram is proposed to connect the recreational area along the northern slopes of Tetlalmanche Volcano with the existing Santa Marta Metro Station (Fig. 18.9). This proposal envisions a new tram line of the Mexicable system that would create a direct aerial route through San Miguel Teotongo, providing transit access to the heart of the community. The new transit hub at Parque Jazmin bridges a challenging topography to connect the park with Plaza Guadalupe and Plaza Violeta.

Among the unique dynamics of public space in Mexico City, many of its outdoor gathering places are likened to outdoor living rooms. While these spaces are clearly outside, their forms are often expressed with highly articulated architectural enclosures. Peebles translates this spatial experience to Parque Jazmin by creating a civic
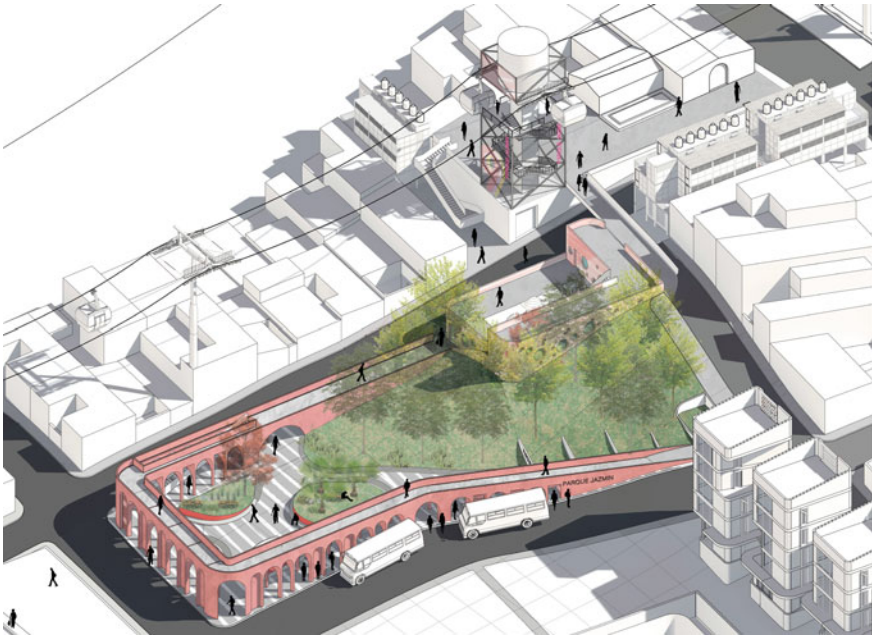
Fig. 18.8 *Parque Jazmin* (axonometric). *Author* Robert Peebles

space that frames the lush forestry of the site within an aqueduct-like architecture. This infrastructural architecture assists with stormwater management and mitigates erosion. Thus, the topography of Parque Jazmin and surrounding streets has been shaped through urban design to channel stormwater from the northern slope of Tetlal-manche Volcano to Plaza Guadalupe and from Plaza Violeta to the park. From there, the aqueduct channels water from Parque Jazmin toward both the new Market Square fronting the public market and the new Parque Central.

Peebles's concept learns from self-build construction techniques found within the informal settlements of Mexico City. The simple beauty of these vernacular constructs reflects a mild climate where multi-layered construction is unnecessary; basic post-and-beam concrete structure is combined with CMU to create extremely cheap and efficient buildings. His housing proposal uses prefabricated timber and mass timber elements to provide a more environmentally friendly way to self-build. Employing the same post-and-beam incremental approach to building, these structures are based on a 3-meter x 3-meter grid constructed of prefabricated structure with infill walls. Building attachments are connected with fasteners rather than wet construction techniques. This method allows families to build faster and with less reliance on masonry expertise.

Fig. 18.9 *Parque Jazmin* (axonometric). *Author* Robert Peebles

Reflecting on Informality

Toward the end of his book, *Latinoamérica, Las Ciudades y Las Ideas* (*Latin America, Cities and Ideas*, 1976), José Luis Romero proposes that the characteristics which best defined the late twentieth century Latin American city were its fractured and fragmented conditions.[2] Following European models, cities across the region in the late nineteenth and early twentieth centuries were socially and physically cohesive, however, after World War II, the migration of rural people to major cities provoked a profound urban transformation. A notable feature of this displacement was that a large percentage of migrants were of indigenous or mestizo descent who often preserved the traditions of their places of origin. It is remarkable, and even paradoxical, that to a great extent those migrants are the contemporary stewards of pre-Columbian culture, which after centuries of oppression and marginalization surreptitiously subsists throughout the region.

This migrational phenomenon provoked a cultural, social, and urban fracture that continues to these days, which to a great extent explains the notion of the Latin American city as a cluster of multiple realities. The main Latin American megalopolises, such as São Paulo, Buenos Aires, Lima, Bogota, and Mexico City, can be understood as a mosaic of social and urban entities, authentic nano-cities with communities that cohabit and coexist, though never fully integrated. Pondering the fracture of Latin American cities, Romero says: "It quickly became apparent that more people were not only a quantitative phenomenon, but a qualitative change as well in which a compact, unified society was replaced by a divided one where two worlds were at odds with each other. For an unforeseeable period of time, the city would contain two coexistent and juxtaposed societies."[3] His reasoning helps to reveal the inherent challenges of the San Miguel Teotongo community, where most of its residents emigrated from the hamlet of Teotongo in Oaxaca, a state in southern Mexico with a strong presence of indigenous people. According to interviews between our faculty and students with local residents, beginning in the 1960s, families from Oaxaca began settling on the slopes of Tetlalmanche Volcano, which was a semi-rural area southwest of Mexico City. The reasons behind this migration are similar to so many other Latin American cities: Following an intense industrialization process, cities were able to provide access to employment, education, and health services that rural areas could not.

The coming decades will be marked by three monumental challenges for global humankind. Climate change, mass-migration, and socioeconomic inequity compel architects and urban designers to play important roles in realizing a more just and sustainable society. We believe that the ideas and projects developed through the pedagogical framework of our studio align with this trend. In this sense, the thoughtful insights of our collaborators and students collectively embody the ultimate aspirations of hopeful rebar, and hopefully, of a more just approach to architecture.

Endnotes

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Part III
US-Mexico Borderlands

Chapter 19
Lesson of Hope: A Case Study on Self-built Homes in the Informal Neighborhoods of Tijuana

Rene Peralta

Abstract Fundación Esperanza de México (FEM), a non-governmental organization, has been working in working-class neighborhoods in the border city of Tijuana, Mexico, for over 30 years. Its mission is to promote social development and improve the quality of life in vulnerable communities through assisted, self-build housing. The program has significantly impacted housing in what were once considered informal neighborhoods on the city's periphery. In the last 20 years, squatting practices have decreased, while state-built social housing has failed due to inadequate size as well as decoupling from the city center and most services. Traditional neighborhoods that once appeared overnight as part of organized squatting movements are now part of the Tijuana's formal/legal settlements, creating a need to "formalize" their housing stock as per city construction codes. This task creates the opportunity to organize community groups to assist with financing and building individual houses through an assisted design program implemented by FEM. A series of experiences and benefits can be described through a methodical overview of micro-financing schemes and assisted self-building progress. To conclude, what are the advantages and lessons of self-built methods, and how do they contribute to community resilience?

Keywords Incremental · Informal housing · Self-built · Community · Tijuana

In 1984, three friends from San Diego, California, filled their vehicles with hand tools and crossed the border to Tijuana, Mexico, with the desire to build houses for low-income families in the periphery of the city. This simple act of generosity was the force that guided a long journey of hope, one that would change hundreds of lives by building dignified homes; however, and most importantly, it improved the quality of life of many residents in disenfranchised communities. The following year, the three builders founded the nonprofit Esperanza International, Inc. (EI), and in 1990, its sister organization Fundación Esperanza de México (FEM) was established in Tijuana to lead local construction efforts.

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Like many organizations building homes in low-income areas throughout the developing world, the first construction efforts used lumber to erect small houses expediently. This construction technique did not endure because wood was expensive and usually of 2nd tier quality, and primarily because it was not a traditional material used for building houses in Mexico, such as concrete block or clay brick. By 1992, FEM adopted and re-engineered an interlocking concrete block unit that did not require mortar between rows. This block performed and looked like the traditional type used around the country. Its interlocking form allowed non-specialized labor, such as volunteers, to put it together, and this became an integral part of the organization's success.

As the interlocking block system was developing, the organization set out to design its community development programs. These programs were conceived for families living near each other within the same neighborhood to reinforce community cohesion. Many of the neighborhoods (*colonias*) on the periphery of the city that participate in the FEM program have already achieved a level of organization through the arduous, but legal, process of land ownership, or as collective migrant groups from southern states that arrived in the city as cohesive family and neighborhood units.[1] The development of programs and community workshops was meant to improve families' economic sustainability during both the program and after they finished building their homes.

As EI and FEM matured as organizations and their programs succeeded, they branched out to focus on specific tasks. The former promotes service-learning immersion trips where volunteers help build homes and participate in Tijuana's unique border culture. In collaboration the latter advances housing construction and savings funds at a community level. This chapter focuses on the work that FEM accomplishes in the working-class communities of Tijuana. To this day, however, both organizations work in unison to promote and cultivate global citizenship through service experiences while building safe and dignified housing for their communities.

Border Urbanism

The border between the US and Mexico is a 3000-mile territory where pairs of cities from both countries form coupled economic units. These urban regions share diverse natural landscapes composed of many watersheds that bridge national political boundaries.[2] This "living" border consists of a complex network of natural ecosystems, human flows, and commercial goods (Fig. 19.1). Tijuana and San Diego's binomial urban metropolis is the most dynamic and transverse region within the US–Mexico Borderlands. In 2015, Tijuana's GDP was estimated at US $21 billion with 4% unemployment and 30% of its workforce in the manufacturing sector. The land entry port at San Ysidro that lies between both cities counted 135,000 daily crossings in the same year.[3]

This economic activity had its origin in the early 1960s when the Mexican federal government envisioned its northern border as a productive economic region.
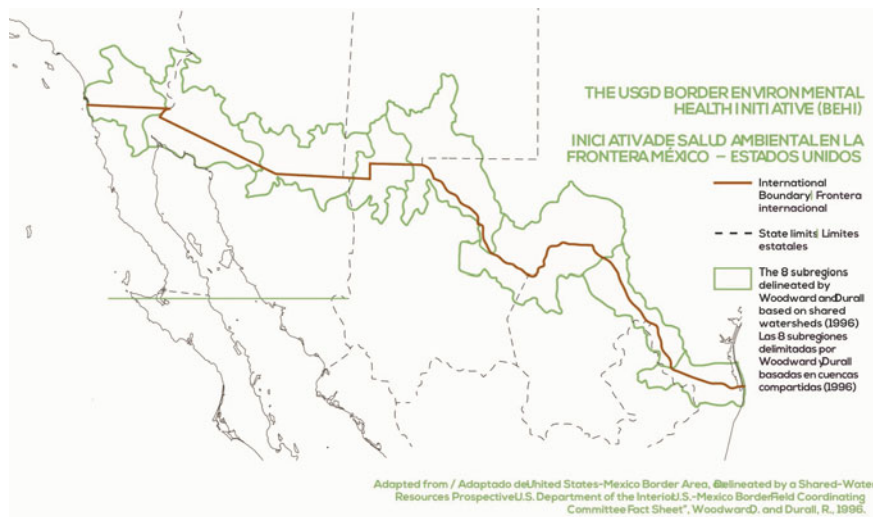
Fig. 19.1 Watershed delineation by Woodward and Durall, 1996. *Redrawn by* Rene Peralta

President Adolfo Lopez Mateos (1958-64) created the *Programa Nacional Fronterizo* (PRONAF) to improve Mexican border cities' commercial opportunities. This program changed the urban physical space of major border towns with a series of new ports of entry and urban redevelopment programs led by the architect Mario Pani. PRONAF gave way to a second program, the Border Industrialization Program (BIP), responsible for developing the manufacturing program that created opportunities for foreign companies to assemble and manufacture goods with lower-wage labor (Fig. 19.2).[4]

The increase in employment also produced a robust migratory flow of workers to the border and, as a result, formed the many informal communities called "colonias" on the periphery of border cities. For migrants, the only housing available was limited to rentals in the few apartment blocks located in the city center. As the flow of migrants increased, many opted to build their own homes on vacant land in the outskirts. This modus operandi created many communities in cities such as Tijuana and other major Mexican cities, and it is thought that in the 1970s and 80s, self-built housing was the primary form of housing.[5]

Since the 1960s, the manufacturing sector (maquiladoras) and cross-border migration have been the engines of local economic growth. More recent industrial parks have been built in the urban periphery where most working-class people now live. However, wages alone have neither produced an equitable and sustainable—nor ordered—urban environment. The government's capacity to respond to these fast-growing communities' infrastructural challenges is insignificant and further hindered by these communities' topography and the lack of housing projects across the city.[6]

Today, specific communities have become consolidated areas of the city, and others are still waiting for land legalization programs and infrastructure services to

Fig. 19.2 Female maquiladora employee in Tijuana. *Photo* Alfonso Caraveo

be introduced. Nevertheless, the housing stock in these communities is still in need of improvement. Therefore, the informality found in many of these neighborhoods is not a legal challenge anymore, but instead an architectural one.

The Architecture of Houses in Tijuana

The residential architecture of Tijuana has been, for the most part, influenced by Southern California iconography rather than Mexican styles. As the city grew in the early part of the twentieth century, its first structures resembled the buildings in old towns of the Southwest United States. Later in the 1920s, San Diego built the fantastical Spanish Colonial-style buildings of Balboa Park, introducing Tijuana to the Spanish bungalow. Urbanist Larry Herzog explains in that Mexico's modern architecture movement had not influenced Tijuana's architecture. Tijuana had only a handful of buildings that followed the ethos of modern Mexican architecture.[7] The rest of the city was made incrementally, and houses were left to each homeowner's unique whimsical idea of what was stylistically appropriate for their creation.

In the working-class neighborhoods of the city, "style" was not an option. As already mentioned, these parts of the city were where families owned property (land) and erected a poorly constructed shelter as their home. Unfortunately, and much like other Latin American cities, land ownership neither guarantees access to traditional bank credit nor construction loans, "…having a property title appears not

to change the financial patterns of families very much. In Mexico, among families whose income total less than six monthly minimum wages, only 10% made use of loans to invest in their homes."[8] It is estimated that 70% of the Mexican population self-builds homes. In some instances, these houses are built with secondhand material brought across the US border and sold to residents at material surplus stores in the same neighborhoods. Materials include old windows, used garage doors, scrap pieces of plywood, and other recycled objects sourced from demolished buildings in California. Once the materials are gathered, houses are self-built with electric and plumbing systems exposed. Therefore, many of those houses lack construction supervision by a professional or a government agency and lack well-maintained electrical and plumbing systems, and their fragile constructions do not perform well in harsh weather. The only other options provided to the working-class population have been developer units that did not accommodate the size of a typical Mexican family, creating segregated and overcrowded horizontal ghettos surrounding the major cities of Mexico (Fig. 19.3).

Currently, the Mexican Federal Government established a housing program titled *ConstruYES!,* allowing access to credits to working-class citizens to self-build their own houses. By utilizing direct credit through the government, citizens will have access to a construction loan to build a house on their property.[9] This is unprecedented, as low-income families had not previously participated in the economy's financial opportunities, and specifically with access to low-interest loans for home construction. This new program requires an element of assistance where a licensed construction professional is part of the project's development phases.

According to the Federal Housing Administration, the *ConstruYES!* program will allow people to build more dignified housing and permit the overall improvement of areas that have developed social and community networks and public services near transportation. It will also dramatically change how working-class housing has been

Fig. 19.3 Unfinished low-income housing in Tijuana built by private developers and subsidized by the federal government, 2018. *Photo* Monica Arreola

Fig. 19.4 A working-class neighborhood built by developers in the eastern periphery of Tijuana.
Photo Rene Peralta

developed over the last 40 years. Previously, it had been controlled by private sector development companies, which have demonstrated a system of profit over people with their secluded micro-housing developments (Figs. 19.4 and 19.6).

The program's success will rely on combining the no-hands, no-intermediary loan system and getting the population proper technical assistance for the integrity of each home's design and construction. However, it can go awry if the technical assistance is not appropriate, causing physical damage to the structure and endangering lives. Local codes must also be followed, especially those dealing with all structural and seismic requirements. The turnaround of building permits for this construction type must be expedited and relatively inexpensive for the program to succeed. This means that communication between the city, state, and federal government beyond political party bickering is integral to the program's success.

The Work of Fundación Esperanza de México

The nonprofit organization Fundación Esperanza de México (FEM) has been undertaking community development programs and self-built housing initiatives for over 30 years. FEM's model is quite similar to the new government program, using local materials and labor, while including families and volunteers to build homes. FEM

also has a technical office that aids with the design, construction documentation, and permitting processing supervised by its in-house registered architect. The program that FEM promotes relies on groups of families based in specific communities of the city coming together to organize a housing saving fund where they deposit a certain amount of money every week. This community fund then works with new families as the first homes are built, producing a revolving all-cash fund to support future construction. This has given FEM a certain autonomy from banks, lending institutions, and high-interest loans that families might not be able to access. FEM homes are designed as a complete project, yet they are built in phases, allowing families to maximize their cash flow and avoid a burden on their daily living expenses. All FEM houses have retained their value and are explicitly designed through a participatory process that promotes dignified homes and strengthens community ties through a self-help system and educational program for vulnerable, working-class families.

Community Development Through Self-help Housing

The work of FEM not only includes the production of houses; its underlying purpose is to develop community ties and assemblages. As theorist Manuel DeLanda explains, "assemblages are always composed of heterogeneous components."[10] Therefore, the significance of a house and the act of its construction become symbolic for the community. As FEM integrates communities into the program, they form a larger assemblage. By 2019, the FEM program has built over 1,000 homes with eight neighborhoods in Tijuana and two in nearby Rosarito.[11] Participating neighborhoods vary in population, location, and time in the program. Some have more experience with the construction process and have procured enough funds to lend to incoming communities. Unlike countless nonprofits and charity groups working across the country, building low-income houses for free without any community participation, FEM's work intends to empower all members of these communities. For this reason, it applies requirements before a house is built.

A socioeconomic survey is administered to each family's household in the participating community to ensure that membership is directed to those who have the most need. In most cases, heads of households are women without a spouse, with one or two children, who are frequently employed in the manufacturing industry. As the organization conducts its survey, community members organize a group with a president, treasurer, and secretary that represents the program's initial families. The group is self-regulating and, in most cases, can resolve any dispute that might arise without the intervention of the organization.

Once the group is organized, it participates in workshops that introduce personal finance concepts, environmental education, and construction techniques specific to the methods employed by FEM. Later, a revolving savings fund is set up, *Fondo de Ahorro para la Vivienda* (FAV), a vital financial model that grows as membership increases. This fund is overseen by a selected group member and community advisor, and it is reviewed in weekly meetings. FAVs are interest-free monetary instruments

that the community uses to fund the building of houses. However, these funds are not the sole resource the families can rely on for construction. They are also entitled to a government grant which, along with the FAV, finances the total building cost.

The workshops and meetings that occur before construction are important because they also serve as a vetting process. Some families might not want to invest time into building both their own home and their neighbors', or are looking for a different solution, such as the tiny wood homes offered by other nonprofits. If the family agrees to be part of the program, they begin depositing their weekly savings into the fund and participate in the lottery process to see who gets to build their unit first.

Self-building

> These principles concern the overall organization of a production process, the relation between people and the design of the houses, the fact that the families themselves plan the houses, the fact that there is a new kind of architect guiding and managing the process, the fact that the construction is undertaken, and money controlled in an entirely new way.[12]

The FEM program and building model resonates with architects' past attempts to produce equitable and dignified housing worldwide. Such as the work of Otto Neurath in the slums of Vienna during the First World War and the institutionalization of settlement movements, "Though Neurath was not instrumental in increasing the association's size, he was mainly responsible for restructuring the settlers' organization into a united, cooperative association."[13]

Based in Berkeley, California, architect and theorist Christopher Alexander experimented with self-built construction systems and community organization in the 1970s. Alexander believes that housing is a coherent system with rules, habits, and laws that require bonds of associations between people and families, and they must be able to express their uniqueness to retain human dignity.[14] These concepts were put to practice in a project Alexander and his Berkeley students undertook in Mexicali, the state capital of Baja California, and a couple hours' drive east of Tijuana. In 1976, based on the ideas of a pattern language that Alexander was already well known for, he organized a group of families to participate in the design of their own self-built house, including building blocks for its construction and the organization of the site's shared public spaces. Only a few houses were completed, and the project was not replicated as Alexander had desired due to the lack of support and trust from the state and local government. However, the vital lesson from Mexicali is how organized self-built housing could establish a fundamental process of integrated values and human dignity.

The construction method employed by FEM is similar to Mexicali in that it also produces the building materials, while the houses are self-built by the community. However, Alexander's experiment intended to design a replicable system for producing housing, while FEM has focused on the local conditions inherent to Tijuana's urbanism. Another aspect that radically changed is that the federal

government is currently adopting self-build techniques in its working-class housing programs across the country.[15] In that sense, Alexander's Mexicali project was ahead of its time.

Building in Tijuana, in general, is a difficult task since most of the working-class neighborhoods are located within steep canyons. Meanwhile, the most affluent communities were built on leveled land of the Tijuana River valley. For this reason, the organization's activities and responsibilities include making sure that the land owned by the families in the program is on stable soil and that it does not have a challenging slope that requires retaining walls. If modifications need to be made to the family's plot, FEM's architect makes plans for the improvements, they are incorporated into the project's documentation, and the costs are added to the project's overall budget. Consequently, the family might have to add a couple of years to the life of their community loan.

Once site visits and planning are completed, the process of designing the house begins. The family and FEM's architect sit down to review the house's site orientation, interior spatial layout, and aesthetic qualities as per the family's desires. All homes in the program are conceived as unique buildings, even though the modular units used to design the homes are always the same. The remaining task is to sign a contract between FEM and family, and then, the project returns to the community group for approval and the initial purchase of construction material. This is when the construction workshops occur, demonstrating the homes' construction process from the concrete blocks' production and their assembly to how plumbing and electrical systems work. In the meantime, FEM draws the technical plans, and then, the family submits the documents to the local authorities for permitting.

The Slow House

For the actual construction of the houses, FEM and its sister organization EI organize groups of volunteers from the United States and other parts of the world to work in different neighborhoods. The goal is to create social ties beyond the community with other citizens of the world. Using a particular interlocking concrete block allows any unskilled volunteer to build foundations and walls and pour concrete floors and roof slabs (Fig. 19.5). Volunteers are usually organized by age, religious denomination if they are a church group, and by discipline if they are affiliated with a university. All volunteers pay a fee to experience building the homes and work alongside the families. Fees are applied to the foundation's operating expenses to help with the families' purchase of material. In 2019, 50 groups with 938 volunteers helped build twenty-one houses to benefit 500 community members.[16] The incremental nature of the house's design and the participatory building process makes the building process slower than typical construction. Yet, this slower form of building allows for sociocultural interchange between different groups from diverse cultural, economic, and national backgrounds (Fig. 19.6).

Fig. 19.5 Interlocking concrete blocks drying in the property of a participating family. *Photo* Monica Peralta

Fig. 19.6 Unfinished low-income housing in Tijuana built by private developers and subsidized by the federal government. 2018. *Photo* Monica Arreola

After the house is completed, the project is documented via geo-referenced photographs sent to the federal government for proof that funds were used adequately. Families usually stay in the program to help build homes for other families and contribute their money to the saving funds for future additions to their homes. The savings funds continue to grow as more people participate in the program. Most families pay their house in full in no more than five years with a success rate of 95%.

The Future of FEM and Self-built Housing

The FEM program has been successful for over 30 years and has transformed the lives of many city residents by providing them with safe and dignified homes. The program is designed for a population that earns low wages or is employed in the informal sector and gig economy. Building houses is an essential aspect of the program but not the only one. FEM situates itself in the idea that sustainability must be a cohesive group of actions and protocols that integrate the environmental, social, and economic realms, and that housing is a human right. The program is different from slum upgrading in that it works within neighborhoods in consolidated areas of the city, and citizens have legal ownership of their land. As the city grows, there are other types of housing challenges that might not fit the strategies of FEM, especially those that include recent squatter settlements or working-class citizens who earn higher wages and have access to loans from traditional institutions. In 2020, amid the COVID-19 pandemic, the groups of volunteers traveling to Tijuana stopped arriving, thus producing an economic emergency for the community savings funds and FEM's overall operational capacity. Self-construction practices also suffered because families did not want to be exposed to COVID-19 on the construction sites. This led to the hiring of trained construction labor which subsequently raised the cost of building homes. As vaccines have rolled out in the United States, more experienced volunteers may return to FEM in the near future, enabling the continued construction of homes already in progress since last year. In the meantime, the organization is restructuring its operational protocols and researching new funding sources apart from volunteer fees.

Like with other organizations of civil society, resiliency is the most critical factor for their success. Changes in family composition, economic opportunities, and construction techniques must be studied and reevaluated if the FEM/EI partnership wants to continue changing people's lives in the twenty-first century. In the spirit of the Mexicali project by Alexander, "we have tried to construct a housing process in which human feeling and human dignity come first."[17] A change of paradigm is urgently needed in terms of the production of working-class housing, the upgrading of informal dwellings, and community engagement through experienced interlocutors from the discipline and profession of architecture.
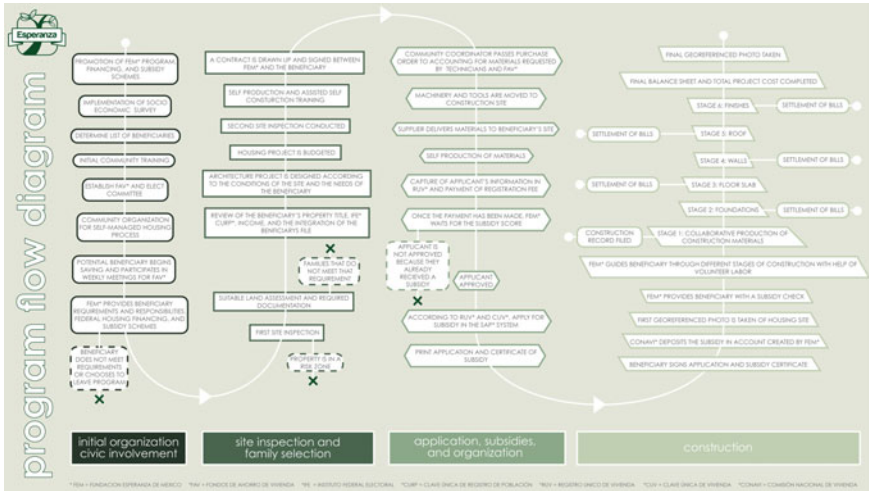
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San Diego. Peralta co-edited with Tito Alegría and Roger Lewis the commemorative edition of A
Temporary Paradise: A look at the special landscape of the San Diego Region (COLEF, 2018) and
prepared initially by Kevin Lynch and Donald Appleyard in 1974. He co-authored with Fiamma
Montezemolo and Heriberto Yepez the book *Here is Tijuana* (Black Dog Publishing, 2006).

Chapter 20
Informality in South Texas: Understanding the Evolution of Colonias in El Cenizo and Rio Bravo

Emilio Longoria and Rafael Longoria

Abstract Informal cities are usually only associated with the developing world, but the emergence of *colonia* communities—informal settlements along the Texas side of the Rio Grande—demonstrates that is not the case. This phenomenon and Texas' attempts to ameliorate it provide insight into the socioeconomic factors that forge informal cities, the legal and planning issues inherent in their growth, and how those issues are best addressed. This chapter focuses on the developmental histories of El Cenizo and Rio Bravo, two colonias downriver from Laredo, Texas, along the US–Mexico Border. In doing so, it distills urban planning lessons from these two emerging and evolving communities. Although typically unadmired, much can be learned from these urbanization efforts on the edge of the United States. Most important of which is that colonias have produced viable communities, despite their opportunistic and informal origins.

Informal cities are usually only associated with the developing world, but the emergence of *colonias*—unincorporated settlements along the Texas side of the Rio Grande—demonstrates that is not the case. Emerging over the last fifty years, these communities are not even uncommon. As of 2015, more than 500,000 people lived in 2294 colonias throughout Texas, and that number is only expected to grow.[1] And while "…colonias also exist in Arizona, New Mexico and California," Texas has the distinction of having "the largest colonias population and the largest number of colonias along the U.S.–Mexico border."[2] This phenomenon and Texas' attempts to ameliorate it provide interesting insight into the socioeconomic factors that forge informal cities, the legal and planning issues inherent in their growth, and how those

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issues might best be addressed. Moreover, it showcases an often-overlooked reality in urban development—it is not uncommon for sophisticated cities to begin informally.

As colonias continue to evolve over the coming years and acquire essential services and regulatory powers, so too must our idea of city-making. And particularly, the notion that there is one "right way" to urbanize. While colonias are the progeny of greedy entrepreneurs, who took advantage of the lack of urban development regulations outside border municipalities, they have blossomed into much more. Indeed, many now offer the sanitation, public utilities, code enforcement, and public education expected of American cities. This success and the continued growth of colonia communities require us to address previously unchallenged maxims. Principally, the idea that colonias are an abject failure.[3] Undoubtedly flawed, and still living in the aftermath of the unethical and illegal business practices that led to their creation, some colonias are charming, functional, and affordable. And despite their shortcomings, they have succeeded in creating long lasting, self-sufficient communities for a previously unserved segment of the population.

This chapter focuses on the developmental history of El Cenizo (Population 3273) and Rio Bravo (Population 4794), two colonias downriver from Laredo, Texas, along the US–Mexico Border. In doing so, it distills urban planning lessons from these two emerging and evolving colonia communities. Although typically unadmired, much can be learned from the urbanization efforts of these colonias at the US–Mexico frontier. Most important of which is that colonias have produced viable communities, despite their opportunistic and informal origins.

Two Colonias Downriver from Laredo

In Mexico, the word *colonia* means settlement or neighborhood—and it applies equally to the richest or poorest neighborhoods. But in Texas, the word is not so easily defined. Currently, the State of Texas has seven different definitions for the term *colonia*.[4] And each carries with it the deeply negative connotations of the unregulated and underserved informal housing conglomerations, which sprouted in semi-rural settings outside more closely regulated municipal jurisdictions. For example, the Texas Secretary of State's office defines *colonias* as "substandard housing developments, often found along the Texas-Mexico border, where residents lack basic services such as drinking water, sewage treatment, and paved roads."[5] Furthermore, the Texas Department of Housing and Community Affairs defines *colonia* as "a geographic area located within 150 miles of the Texas-Mexico border that has a majority population composed of individuals and families of low and very low income."[6] While both definitions capture certain aspects of the colonia experience, they short shrift the exigencies, optimism, and cultural peculiarities that characterize contemporary Texan colonias. Understanding these formative factors is crucial to appreciating the full extent of the urban planning issues that these communities face.

The neighboring towns of Rio Bravo and El Cenizo are located in Webb County, Texas, about 20 miles south of Laredo—the county seat that the Spaniards originally

founded in 1755 and now the busiest commercial land entry point in the United States.[7] Both colonias were developed as isolated, but affordable, bedroom communities for Laredo about fifty years ago. Rio Bravo and El Cenizo front the Rio Grande (officially called Río Bravo in Mexico) and both are laid out as elongated rectangles perpendicular to the river in a manner reminiscent of the eighteenth-century Spanish *porciones* that first attempted to privatize this territory.[8] This land is semi-arid, but the Rio Grande is surprisingly beautiful here, with plenty of fishermen on both sides of its verdant banks.

Both communities were incorporated as cities in 1989. Today, Rio Bravo and El Cenizo each have their own city halls, fire stations, community centers (built with the assistance of Texas A&M University), and tall water tanks (Fig. 20.1) boldly featuring each towns' names. And just like in Laredo, the population of these new towns is more than 95% Hispanic and largely bilingual. In 2012, Laredo was singled out as the least diverse metropolitan area in the United States—El Cenizo was featured in the same report as one of the least diverse places in the country.[9] Rio Bravo attracted national attention in 1999 when it made Spanish the official language for its City Council meetings (resulting in threats from the Ku Klux Klan) and sued the State of Texas to remain a sanctuary city in 2017.[10]

The City of Rio Bravo is bound by Highway 83 to the east, the Rio Grande to the west, the city limits of Laredo to the north, and Espejo-Molina Road to the south. It includes a large gas station fronting the highway overpass, a public park overlooking the Rio Grande (Fig. 20.2), and is serviced by Salvador Garcia Middle School (located on the Laredo side of the city limit) and S.T.E.P. Academy (an alternative public high school for at-risk students). Several of its streets are named after famous rivers in Spanish, such a "Rio Hudson," "Rio Sena," and "Paseo Danubio."

The City of El Cenizo can only be reached by driving a couple of miles past Rio Bravo after exiting Highway 83. Espejo-Molina Road borders it to the east and the Rio Grande to the west. The brand-new Kennedy-Zapata Elementary School is located just across the street from the city's eastern limit. The residents of Rio Bravo and El Cenizo share their public schools and are served by a variety of churches, including Santa Rita de Casia—a recently completed Roman Catholic parish belonging to the Diocese of Laredo.

The two towns are laid out on regular grids of long rectangular blocks. There is still a semi-rural character to these neighborhoods—post and wire fences are widespread; lots are very large. Extended families often share properties in multiple structures arranged around parking courts in a manner like the way local ranches are laid out. Indeed, the most appealing aspect of these neighborhoods is the multiple manifestations of outdoor social spaces that serve as nuclei for family compounds—with lawn furniture, children's play equipment, picnic tables, and grills arranged under trees or protected by a variety of inventive shading structures.

Some buildings reflect typical Mexican residential construction methods with load-bearing concrete block walls (there is even a bustling concrete block plant in Rio Bravo) and hand-crafted wrought iron. While other buildings feature more American lineages, such as mobile homes (some with superimposed double roofs to ameliorate the harsh sun), and standard wood-frame construction (Fig. 20.3). Some

Fig. 20.1 Rio Bravo water tank. *Photo* Emilio Longoria

recent homes are indistinguishable from those in the middle-class suburbs in Laredo, and even grass lawns are starting to appear (a sign that water, and the money to pay for it, are now readily available).

Small businesses, such as bakeries, butcher shops, and tire repair shops, have emerged in both communities (Fig. 20.4). Unusual apartment typologies have been added to the family compounds, with plenty of handmade signs advertising rooms for rent. Improvised retail ventures are also visible in many homes, including *taquerias*, snow cone stands, COVID-19 mask vendors, and clothes for sale along front yards.

Fig. 20.2 Outdoor living room in Rio Bravo. *Photo* Emilio Longoria

The Legacy of Cecil McDonald

The creation of El Cenizo and Rio Bravo is attributed to Cecil McDonald "a notorious developer responsible for a number of struggling neighborhoods" in and along the Rio Grande.[11] In response to largely immigrant demands for affordable, discrete, and conveniently located housing near border crossings, McDonald purchased swaths of "cheap, hardscrabble land"[12] along "isolated rural roads, often on abandoned farmland or desert scrub."[13] From these lands, McDonald carved out the El Cenizo and Rio Bravo colonias.[14]

Taking advantage of the lack of urban development regulations in these rural communities, McDonald began informally subdividing and selling *ranchitos* (small ranches, some less than an acre in area) in Rio Bravo and El Cenizo for rock-bottom prices.[15] As late as the early nineties, for example, these properties could be purchased for a "down payment of $100," and "$50 a month" payment thereafter—often with interest rates of more than 12 percent (closer to interest charged by credit cards than to conventional mortgages at the time).[16] Moreover, because McDonald typically structured his land sales as a "promissory note secured by a contract for deed" as opposed to "a real estate lien note secured by a deed of trust," any sale McDonald offered did not have to be formally recorded with the Webb County Clerk's office.[17] Hardly trivial, this was an important advertising point that provided recent—often

Fig. 20.3 Mobile home with shading structure in Rio Bravo. *Photo* Emilio Longoria

undocumented—immigrants with a discrete way to pursue "the American dream" without disclosing themselves to local or federal authorities.[18]

However, these rock-bottom prices came at a significant cost. Unlike "conventional builders," who must "provide paved roads, sewers, water lines and utilities, as local laws normally require."[19] McDonald kept his development "costs down by denying many of [his] residents clean water, smooth streets, and common sanitation."[20] And where impediments did exist to McDonald's low-cost development strategies, he used his "political influence" to ensure "that laws meant to curb the growth of colonias [were] not enforced."[21] The end result of these predatory development strategies being precisely what the Texas Secretary of State defines as a colonia—rural housing developments that were formally disenfranchised from public utilities, lacking safe building practices, and located far from schools. Because McDonald's land sales were fashioned as "10-year contracts of deed" as opposed to "conventional mortgages," colonia buyers were left "without ownership rights" in the ranchitos they had purchased "until their final payment" had been received.[22] This meant that McDonald could "swiftly evict[]" any buyers that fell behind on their payments.[23] Sometimes borrowers did "not even know how long they [had] to keep paying"—often paying far in excess of the contracted installment amount.[24]

As a preamble to his 1999 book documenting and comparing informal settlements on both sides of the U.S.–Mexico border, Peter M. Ward included McDonald's own

Fig. 20.4 Improvised front yard retail in Rio Bravo. *Photo* Emilio Longoria

"recipe" for creating colonias in Texas as told to him by the developer during a characteristically frank interview. Step #9 in McDonald's recipe states: "If pressured by the state or county to provide improvements such as water, sewers, or streets, argue lack of funds but continue selling lots in order to finance improvements. Meanwhile, keep on making money. It may take a year to be subjected to enforcement action, at which time you declare bankruptcy because of the high cost of improvements."[25] McDonald also recommended that developers "relocate to another city [and communicate] with attorneys by mail."[26]

El Cenizo and Rio Bravo after Half-a-Century

Despite many hurdles, El Cenizo and Rio Bravo have blossomed over the past fifty years into vibrant, organized, and tight-knit exurban communities. In 1989, both El Cenizo and Rio Bravo incorporated as Texas municipalities, which formally endowed them with important urban planning powers such as eminent domain and zoning.[27] And while their incorporation as cities has probably improved life for residents in these communities, it must be noted that it was McDonald who brokered the successful incorporation effort in El Cenizo and Rio Bravo to avoid county oversight in the same year that the Texas Legislature adopted the "Model Subdivision Rules"

imposing sanitation and development regulations on unincorporated areas of Texas counties.[28]

Over time, many businesses, services, and shared spaces have sprouted throughout the community, bestowing it with a pleasant and distinct culture. It is not uncommon today, for instance, to see residents barbecuing at Rio Bravo Park, playing in its rocky soccer field, and cooling off by fishing in the Rio Grande—all while being monitored by multiple roving US Border Patrol units (Figs. 20.5 and 20.6).[29] Indeed, both communities have evolved to such a degree that it is probably inaccurate to categorize them as colonias (as the State of Texas defines them) anymore. Today, "nearly all the streets have been paved," the cities have fire stations, schools, library, and police forces. Through a partnership with the State, both are serviced by a multi-million-dollar water filtration system.[30]

As for Cecil McDonald, beginning in the 1990s, Texas state officials launched an aggressive campaign toward resolving and avoiding the perils of colonia development. Specifically, the State's campaign had three goals: (1) Remediating the substandard conditions created by McDonald and other developers like him[31]; (2) Preventing other colonias from being built[32]; and (3) Prosecuting those responsible for creating colonias in the first place.[33] While the State achieved some of these goals relatively quickly (for example, it secured a bankruptcy judgment against McDonald in 1995 that required him to use his "assets to refinance mortgages, pave streets, and build water and wastewater infrastructure in El Cenizo and Rio Bravo."),[34] it had

Fig. 20.5 El Cenizo police patrol car. *Photo* Emilio Longoria

Fig. 20.6 Rio Bravo code enforcement truck. *Photo* Emilio Longoria

almost no success in preventing other colonias from being built. In fact, the most recent data available suggests that colonias are growing now faster than ever before.[35]

Lessons Learned?

El Cenizo and Rio Bravo have succeeded in becoming the fully formed urban developments that were originally promised to early residents. But they did not do it alone. One of the more empowering observations from the colonia saga has been the ways

in which activists and journalists were able to successfully pressure various levels of government into spending considerable resources on low-income and immigrant housing. For example, through a joint effort spearheaded by activists and the press, El Cenizo and Rio Bravo received a $12-million-dollar water filtration system from the State.[36] And since 2002, the Texas legislature has consistently apportioned funding to legal clinic programs designed to help convert residents' "contracts of deed" into "conventional mortgages."[37] Absent these sustained and unified activism efforts, it seems unlikely that the State would have made any of these investments. As one of the public comments to the contract for deed conversion program explains, many communities around Texas suffer with the same title issues, but the State has not "expanded" the contract for deed conversion to "non-border areas."[38]

The irony of the fact that El Cenizo and Rio Bravo have ultimately achieved the fraudulent promises made by *colonia* developers without the developers' help has not gone unnoticed. By side-stepping their construction obligations, colonia developers were able to push necessary building practices on to the State. One report estimates that installing water and sewage in Hillcrest, a West Texas colonia where the original developers did not provide such services, would cost $120,000 per lot for homes that are only worth between $30,000 and $40,000.[39] But the failures of colonia developers cannot overshadow the advancements residents have been able to make.

If you were to walk along the streets of El Cenizo or Rio Bravo today, you would see that they are paved, sewers are installed, and each home has access to water. In fact, there is little that differentiates El Cenizo and Rio Bravo from parts of established nearby Texas towns, like San Ygnacio or Zapata (Figs. 20.7 and 20.8). And while undocumented immigrants largely spearheaded these urbanization efforts, "more than 60% of adults and 94% of children" in colonias are now US citizens.[40] Indeed, "…[as] citizenship rates grow and colonias evolve into working-class neighborhoods with political clout," these communities have become a meaningful constituency in political battles beyond their boundaries.[41]

However, these successes and the increased formalization of communities like Rio Bravo and El Cenizo are not universally celebrated. Since discussions about colonias and other informal settlements entered the state and national spotlight, policies aimed at addressing them have been largely geared toward prevention rather than facilitation. For example, as far back as 1995, a Federal Reserve Bank report stated "…preventing the development of new colonias without sufficient infrastructure is an important first step in solving the problems that colonias face."[42]

This attitude has in fact delayed the formalization of other communities. The same report cited above pointed out that "…colonia residents often find themselves in a catch-22 situation. Even when water lines and sewer systems are in place, many cannot access the services because their homes do not meet county building codes."[43] Such is the case of La Presa, another Cecil McDonald venture near Laredo, where residents are being prevented from connecting to existing electrical supply networks by current state regulations. Furthermore, local property owners have been forced to acquire very expensive (though ecologically sustainable) mobile solar electrical generators with the help of non-profit organizations to service their homes.[44]
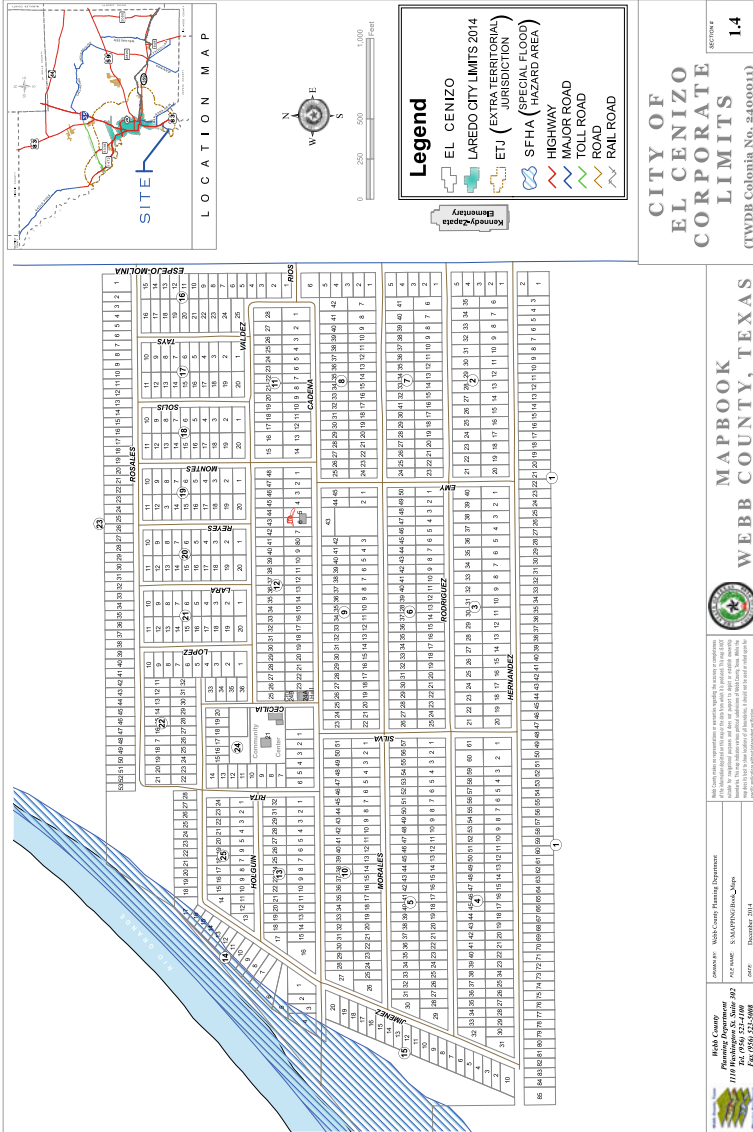
Fig. 20.7 Plan of the City of El Cenizo, Texas. *Courtesy* Webb County

Fig. 20.8 Plan of the City of Rio Bravo, Texas. *Courtesy* Webb County

Rather than seeing colonias as flowers that managed to bloom in the desert against all odds, state policies have treated them like weeds that need to be plucked. While border politicians—ranging from progressives like former El Paso congressman Beto O'Rourke to conservative Democrats like Laredo congressman Henry Cuellar—have been very supportive of efforts to bring water and electricity to existing colonias, they have been almost unanimous in their support of enacting measures to stop similar developments from sprouting.[45] Unfortunately, this has aggravated conditions and delayed the deployment of services to communities across the state.

The building and development practices of the initial colonia developers were reprehensible, and the harms they created should be redressed. But these sordid stories cannot prevent us from appreciating the way that these developments empowered home ownership for those who had no other paths available. Perhaps more importantly, colonias have been able to force state and local investment in affordable housing along the border. Considering these major contributions to Texas' affordable housing crisis, it no longer seems appropriate to view colonias as the failure they once were.

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Chapter 21
Stigmas of Informality: Disaster Recovery and Reconstruction in the South Texas Colonias

Danielle Zoe Rivera

Abstract In the United States (US), post-disaster reconstruction often leverages a stigma of "informality as illegality" to withhold post-disaster funding. This chapter illustrates how this occurs through the example of Texas/Mexico colonias and their efforts to rebuild after Hurricane Dolly in 2008. In the context of the Texas/Mexico border, "colonias" are low-income communities experiencing a dearth of adequate housing and basic physical infrastructures (such as affordable potable water, reliable electricity, and floodwater management, among others). Colonias also lack adequate access to political representation and planning. This lack of representation can be largely attributed to the stigmas of "informality and illegality" placed on colonias. This chapter studies the stigma of informality which constitutes a driving factor influencing inequitable access to post-disaster reconstruction and recovery in Texas/Mexico colonias by examining FEMA's response to colonias after Hurricane Dolly. Following the hurricane, colonia residents experienced higher rates of rejection for FEMA aid (double the national average for similar disasters). In response, colonia organizers successfully sued FEMA and, through the lawsuit, revealed the policy and programmatic mechanisms used to leverage stigmas of informality. In the process, colonia residents wrested control of perceptions of their communities and fought the stigmas of informality within US emergency management. From this case, it is evident that the US not only experiences informal urbanization, as many informality scholars acknowledge, but actively recognizes and acts upon informality in practice.

Keywords Informality · Disasters · Texas · Colonias · US-Mexico border

Informality is increasingly recognized as a phenomenon in the United States (US)[1]; however, it remains an undercurrent in the assumptions made about particular communities. These assumptions are heavily racialized, instituting a territorialization of poverty, or sociospatial stigma whereby Black and Latinx communities are

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spatially segregated due to fears of racialized violence.[2] Here, I examine how territorialization of poverty intersects with perceived illegality stemming from expectations of informal housing to create a "stigma of informality." In the US, stigmas of informality become tied to communities as their presupposed character, determining their eligibility for assistance, funding, and access to planning.

In particular, this examination of stigmas of informality is concerned with post-disaster recovery and reconstruction programs, specifically the Federal Emergency Management Agency (FEMA) Individuals and Households Program (IHP). This chapter examines the stigmas of informality attached to US-Mexico *colonias*, or low-income communities that have historically been withheld many forms of physical infrastructure and planning. Following Hurricane Dolly in 2008, many colonias in South Texas were withheld IHP funding, with catastrophic results for these communities.

Ultimately, the chapter argues for recognition of the stigmas of informality operating within US post-disaster recovery and reconstruction programs. Firstly, informality is defined and set within the broader literature on its intersections with disasters and US housing. Then, the case of the colonias is introduced and examined to expose stigmas of informality operating through their post-Hurricane Dolly experiences. Lastly, the chapter closes with the implications of the case study; namely, that stigmas of informality exist within US disaster policies, and that their implicit nature remains harmful to low-income communities of color.

Examining the "Stigma of Informality"

> Informality […] is not a set of unregulated activities that lies beyond the reach of planning; rather it is planning that inscribes the informal by designating some activities as authorized and others as unauthorized…[3]

As Ananya Roy explains, informality is often defined as a set of actions outside the purview of "formal" planning practices, despite the reality that planning itself is what demarcates (in)formality. In other words, informality is not an inherent characteristic of an individual or community, rather, it is a "mode of social transaction"—a social construct which delineates what is bureaucratic from what is normative.[4] In this sense, informality is primarily a *political* issue which defines who is or is not deserving of assistance and aid.

Increasingly, disaster recovery and reconstruction are seen in a similar manner: There is widespread recognition that disasters are not "natural" phenomena but are primarily political.[5] As such, informality becomes a significant contributor in post-disaster outcomes.[6] The precise role informality plays in outcomes is not universally agreed upon (even beyond disaster studies),[7] and as a result, informality is acknowledged as a lifeline post-disaster (whereby informal networks are shown to more quickly and adeptly activate immediately following disasters).[8] Perceived informality also entrenches post-disaster inequities, however, as the state makes determinations

of who is or is not deserving of assistance.[9] Taken together, there is ample evidence that informality in the built environment places particular impoverished communities at increased risk of disaster, despite their immense resiliency and capacity to reconstruct the city.

With an estimated one-quarter of the world's population living in "informal" communities, it is imperative to understand how this mode of social transaction intersects with disasters.[10] In the US, informality has been examined in very discrete policy areas—street vending or unauthorized in-law suites for example.[11],[12] Recently, however, the scope of informality in the US has begun expanding to include other areas of US urbanization and policies,[13] but also to call for more attention to informality in housing writ large.[14] Notably, Noah Durst & Jacob Wegmann describe the limitations of historically not recognizing informality in US housing[15]:

> By failing to characterize a wide variety of housing arrangements as informal, US-based housing scholars have passed up an opportunity to transcend their traditional inward focus, and both learn from and contribute to a vibrant, global scholarly and policy discussion on housing.[16]

Clearly, then, stigmas of informality form a major impediment for equitable post-disaster housing recovery in the US. As informality remains seen as a non-issue, it then becomes an implicit undercurrent in all policy conversations.

To examine these issues, the case of South Texas "informal" communities is studied following Hurricane Dolly in 2008. These results emerged from thirty organizer interviews between 2014 and 2020. During this period, participant observations of community events and meetings were also conducted. The case presented here constitutes one part of the larger research findings with direct implications for our understanding of stigmas of informality in US post-disaster recovery and reconstruction.

Case: Colonias of the Río Grande Valley

On July 23, 2008, Hurricane Dolly made landfall in the South Texas region known as the Río Grande Valley (Valley). The Valley is a tri-county area (Starr, Hidalgo, and Cameron counties) juxtaposed by the US-Mexico border to the south and the Gulf of Mexico to the east. Its physical location inscribes the region's marginalized positionality in Texas politics and vulnerability to disasters. This combination led to poor post-disaster outcomes following Hurricane Dolly, particularly for the region's lowest-income communities—the colonias. Colonias are low-income communities found on the US-side of the US-Mexico border. They are identified by their historic lack of adequate housing, basic services, and infrastructure.[17] Texas contains the most colonias of any border state, with an estimated 2294 colonias housing 500,000 people, most of whom live in the Valley.[18]

Valley colonias suffer from a history of spatial segregation, as poor households were forced to live outside of the region's incorporated cities in developments that

were (legally or illegally) subdivided from rural farmlands (Fig. 21.1). Unfortunately, when these lands were subdivided there was little to no oversight. Most colonias were developed without basic infrastructure such as potable water, electricity, wastewater management, or food access. Additionally, colonias were subdivided from farmlands that were graded to retain rainwater. Thus, they experience widespread flooding in even the lightest of rainstorms (Fig. 21.2).[19] These physical and infrastructural concerns are exacerbated by colonias' lack of political representation and voter suppression. Taken together, colonia residents struggle to change their perceptions in the eyes of the government.

These issues are buttressed by municipalities that perpetuate a fear of violence from "unlawful" colonia residents, most of whom are recent immigrants to the US or second-generation citizens. Colonias originally developed in the 1960s to house migrant farmworkers brought to the US from Mexico through the Bracero

Fig. 21.1 Home in Cameron Park, one of the largest colonias in Cameron County, TX. *Photo* Danielle Zoe Rivera

Fig. 21.2 Evidence of flood damages in a colonia north of Weslaco, TX. *Photo* Danielle Zoe Rivera

Program.[20] Stigmas of "foreignness" continue to be associated with the colonias. With the end of the Bracero Program, colonia residents largely shifted to service-based jobs throughout the region; however, the perception of colonia residents as non-citizens persists. While colonias do contain higher numbers of undocumented residents than the rest of Texas, this difference is closing with each generation.[21] In fact, the demographics of second and third generation colonia residents largely mirror that of Texas, leading to substantive shifts in colonia activism and culture over the past decade.[22] However, these facts have not yet been reflected in colonia policy.

As a result, colonias experience a sociospatial stigma that equates their poverty and perceived citizenship status as "illegal" and, therefore, informal.[23] Colonias are not illegal, however, they are "extralegal" or at the edge of what is legal per US and Texas laws.[24] Yet, this liminal legality has historically led to their spatial segregation and lack of government assistance.[25] Colonias are largely located in unincorporated territory or areas lacking local governance. Texas has a long history of lax regulation and planning in its unincorporated territories, which over time has permitted the development of forms of urbanization that do not exist (and are not permitted) elsewhere in the US.[26] Of concern is how the stigma of informality emanating from the extralegality has real consequences for the colonias. Here, the consequences relative to post-disaster outcomes are examined.

Colonias After Hurricane Dolly

Following Hurricane Dolly in 2008, Valley colonias experienced widespread devastation (Fig. 21.3). The hurricane made landfall in the Valley as a Category 2 storm, causing massive damage throughout the region. Due to their propensity for flooding, many colonias dealt with standing waters in their communities for over 180 days. As an organizer in the region described: "Hundreds of the most vulnerable area residents waded through waist-deep brown water with a few belongings wrapped in plastic bags held high in a sad caravan of Dolly's displaced."[27] In the subtropical environment of the Valley, these standing waters bred mosquitoes that caused a dengue fever outbreak, while infected local water sources caused a cholera outbreak. In addition to flooding issues, colonia homes sustained major roof damages, leading to the growth of mold inside homes. Despite these substantial post-disaster issues, stigmas of informality interfered with equitable post-disaster recovery and reconstruction. The day after the hurricane passed, a major disaster (DR-1780) was enacted which activated FEMA's programs and support networks.

Colonia-based organizations work diligently after the storm to assess the damages and connect residents to FEMA's programs, mainly the Individuals and Households Program (IHP). IHP is one of the main sources of post-disaster aid in the US; however, following Hurricane Dolly, colonia households experienced myriad issues accessing these funds. To receive IHP assistance, households must apply for funding. FEMA then sends a house inspector to the home to assess the extent and causes of damages, as
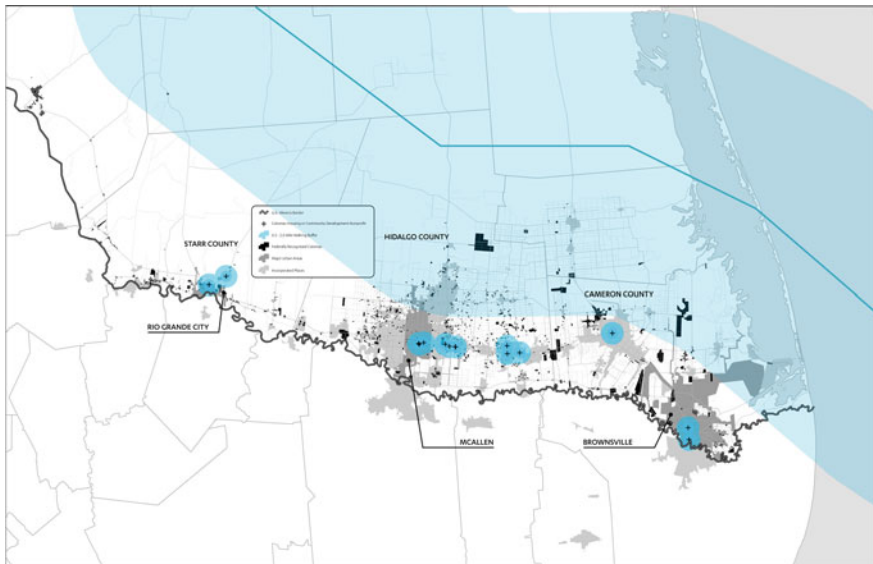
Fig. 21.3 Map of Río Grande Valley showing the location of colonias against the path of Hurricane Dolly. *Drawing* Danielle Zoe Rivera

well as to determine whether the house qualifies for assistance. Following Hurricane Dolly, FEMA rejected an estimated 85% of IHP applications, approximately 50–71% for "deferred maintenance,"[28] the average rejection rate for IHP is 26%.[29] Deferred maintenance is not defined in FEMA's IHP program, but is elsewhere defined by FEMA as damages that cannot be directly attributed to the disaster at-hand.[30] In essence, poor pre-disaster housing conditions in the colonias caused them to lose access to one of the most critical forms of US post-disaster assistance. Examining how this occurred demonstrates how stigmas of informality operate through US disaster recovery.

Realizing IHP rejection rates were much higher than usual, a grassroots organization called La Unión del Pueblo Entero (LUPE) gathered the resources to sue FEMA. LUPE has an expansive constituency of over 10,000 members across the Valley. They organize on a lesser-known model from César Chávez known as the Community Union model, which emphasizes daily contact with constituents.[31] This daily contact then allows the organization to rapidly activate in support of constituents as needed; in this case, in support of colonia residents rejected by FEMA, who were living with the damages from Dolly. LUPE worked with the Texas RioGrande Legal Aid (TRLA) to undertake the lawsuit. TRLA is a nonprofit founded to support communities across South Texas with legal services.

Together, LUPE and TRLA sued FEMA representing colonia households across the Valley (*LUPE,* et al. versus *FEMA*, *B:08-cv-487* [2008]). The lawsuit took nearly a decade to resolve, finally settling in 2017. FEMA lost and was compelled to re-evaluate all IHP applications from Hurricane Dolly; however, FEMA did not alter their policies, programs, or procedures. As a result, low-income communities of color continue to experience much higher rejection rates from FEMA programs.[32]

Stigmas of Informality as Illegality in the Colonias

Despite this outcome, the lawsuit remains informative. The discovery phase of *LUPE,* et al. *versus FEMA* unearthed several insights regarding FEMA's assumptions of informality in post-disaster programs. The first of which regards the process undertaken to determine eligibility. The second of which regards the policy language used to uphold the selection process.

Firstly, it was revealed that home inspectors were given maps locating the colonias prior to entering the Valley, as well as told to "expect sub-standard construction [and] deferred maintenance."[33] As a result, home inspectors, most of whom were not familiar with the Valley, entered colonias expecting to deny IHP applications. Not fully understanding the histories of disenfranchisement of the colonias, inspectors walked onsite expecting to see non-code compliant homes and illicit activities. As such, colonia residents reported antagonistic interactions with the inspectors. Many inspectors made little to no attempt to communicate with the residents.[34] Many even refused to approach colonia homes, remaining in their cars for the duration of the inspection. It became evident in discovery that the incentive for inspectors,

who were paid per inspection, was to close cases quickly but not thoroughly.[35] By identifying colonias spatially via maps, FEMA stigmatized these communities from the outset. The demarcation of their boundaries was a territorialization—essentially a contemporary form of red-lining—of their poverty and identities as "illegal" and, therefore, informal. The identification of the colonias a priori suggests FEMA had a familiarity with the conditions present in these communities and believed they were unfundable from the start—the reification of the stigmas of informality that haunt the colonias.

Secondly, FEMA's implied, but unclear, definition of "deferred maintenance" suggests a level of perceived housing informality that is unacceptable to the agency. Furthermore, evidence from several hurricanes in Texas shows that there are continually worse post-disaster outcomes for impoverished communities.[36] LUPE's concern after Hurricane Dolly was that FEMA was equating extreme poverty with informality and illegality. This occurred through an unclear definition of deferred maintenance that criminalized pre-existing damages on homes. The median annual income for colonia households is less than $30,000 (as opposed to $51,000 in the rest of Texas) and the poverty rate for colonias is 42% (as opposed to 17% in the rest of Texas).[37] As a result, many colonia households struggle to keep up with household repairs, perpetuating stereotypes of informality and building code violations.

From these two points, the tacit acknowledgments of informality in US post-disaster programs come into focus. There is often recognition of these communities—as in the identification of colonias on physical maps. This recognition is premised upon territorial stigmas of poverty and race that often maintain deep histories of inequities that drive notions of what is formal versus informal. Thus, informality in the US context cannot be detached from larger issues of racism and classism—as seen in the lack of reflection upon changing colonia demographics in colonia policies. Additionally, these stigmas are often reified and acted upon through structures of post-disaster recovery and reconstruction programs. Namely, determining who is deserving of aid becomes detached from these histories and stigmas. "Upkeep" becomes euphemistic for "formalized." In the case of post-disaster programs, eligibility is instead driven by ahistorical examinations of the state of housing, race- and class-blind systems that ultimately reward middle-class, suburban housing developments over other forms of urbanization.

Conclusion

From this case, it is evident that the US is not only home to informality as many scholars acknowledge, but actively recognizes and acts upon informality in practice and policy.[38] These notions of informality remain distinct from those seen elsewhere in the Global South, but nonetheless show similar forms of othering.[39] In particular, the case of the colonias after Hurricane Dolly demonstrates how FEMA and other US institutions leverage stigmas of informality to withhold funding from impoverished communities of color.

To address this, the first step would be to define more clearly "deferred maintenance." However, the term itself, whether defined or not, generates inequitable outcomes for low-income communities. Instead, an acknowledgment is needed—that low-income communities are more likely to struggle with costly housing repairs. As a result, home damages caused by a storm may be exacerbating pre-existing issues that need support. Ultimately, the goal is to avoid a stigma of informality and the assumption of illegality.

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Chapter 22
Quasi-Informality on the Border: The Economic and Socio-Spatial Dimensions of Latino Vendor Markets

Edna Ely-Ledesma

Abstract This chapter explores the quasi-informality of Latino vendor markets (LVM) on the US-Mexico border. Qualitative and quantitative as well as primary and secondary data were collected and analyzed using a mixed-methods approach. Key findings explore the intersectionality of the formal and informal through physical, social, and economic indicators. This study rejects the traditional dichotomous construct of informality and explores the role of LVM as operating in the in-between realm of quasi-informality. By exploring four LVM in California and Texas, the study found that these markets attract Latinos, and their open spaces transform into vibrant city places. As the majority of the people that live in the selected areas of study are Latino, these are places that are absorbed by Latino communities. The quasi-informal nature of their economic and spatial dimensions allow for the unfolding of a safe, Latino-centric environment that facilitates socializing and gathering. LVM illustrate the importance of social construction of space and they are key elements of border cities where the intersection of the formal and informal collide. They represent a quasi-informal environment that is manifested in its economic, spatial, and social dimensions. LVM are an important component of the American city culture that must be valued and understood in considering the future of the twenty-first-century US city.

Keywords Latino · Markets · Border · Quasi-informal · Flea markets

Key components of American city culture should be valued and understood when considering the future of the twenty-first-century US city. This chapter explores this subject matter through a study of quasi-informality of Latino vendor markets (LVM) on the US-Mexico border. LVM, classified in the US as flea markets or swap meets, is an understudied market typology prominent on the US-Mexico Border.[1] Flea markets are considered by some to be historic derivatives of the oldest market forms in peasant societies.[2] A seminal study of flea markets defined them as "action

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scenes" where action occurs where people are forced to interact through the market process of economic exchange, as the historic residue of "archaic marketplaces" in peasant societies which evolved and adapted based on local needs.[3] Yet, despite their infamy as anachronistic, archaic, or primitive, flea markets and swap meets continued to be seen as marketplaces that fostered economic exchange. Some argued that these should not be classified as second-order market systems that are "less than" other market types such as farmers markets.[4]

The shift of markets from informal to formal settings is evident in the history of markets in the US. Social, economic, and political forces all shaped the urban narrative and role of markets in the US.[5] At the turn of the twentieth century, unauthorized street vending in New York City underwent forced relocation to places seen as "out of the way" such as the underside of major bridges and ultimately ended in enclosed markets.[6] During the mid-twentieth century, the growth of the grocery store industry contributed to the decline of outdoor markets.[7] Products were no longer limited to local distribution due to technological advances. Simultaneously, suburban malls introduced a more formal model of economic exchange while attempting to replace elements of urban life, much like New Urbanism has tried to recreate the nostalgia of historic city centers.[8]

The evolution of the urban typology of LVM also sheds light onto their quasi-informal status. In the late twentieth century, swap meets and markets became hubs and centers for Latino-owned businesses.[9] Through the post-war era and the 1960s, white vendors selling mostly secondhand goods dominated flea markets and swaps meets. In Southern California, swap meets began to pop-up as temporary markets that would take over a drive-in parking lot.[10] While drive-ins defined a particular timeframe of post-war Americana and individualism as embodied by the automobile, the decline of drive-ins in the 1980s paved the way for the rise of LVM as the markets began to cater to a Latino demographic.[11] LVM redefined drive-ins through atypical adaptive reuse of the space for socializing and gathering in public. During the 1970s, swap meets in California saw a rise in use by Latino immigrants who started selling goods and affordable services. They began to replicate the market organization and design of *tianguis*, or Mexican open-air markets. As drive-in theaters saw a decline, swap meets and flea markets began to proliferate as property owners sought to bolster profits through daily use of the marketspace.[12] By the 1980s and 90s, indoor swap meets became more prevalent by occupying underutilized and vacant shopping centers and formally industrial buildings.[13]

Economic Dualism and Marketplaces

During the twentieth century, economic theory began to address how urbanization and modernism had induced an increased polarization of the economy in cities and conceptualized these in the logic of economic dualism.[14] Parallel to modernist paradigms of economic development, the post-war approach focused on macro-scale issues that dehumanized the understanding of city development. With analysis

focused on high aggregate growth models, macroeconomics was at the center of the debate in the mid-twentieth century.[15]

Building on Arthur Lewis's 1954 dual-sector model on economic development, Robert Averitt's work, and research by the International Labor Organization (ILO) on developing countries, anthropologist Keith Hart first used the term "informal sector" in 1973 to characterize uncounted employment opportunities in Ghana.[16] Hart focused on structural economic issues to explain the informal sector. His model stressed the potentially productive value of the informal sector and questioned the feasibility and desirability to shift employment from the informal to the formal sector as proposed by conventional economic development policy. Hart recognized that in the context of developing countries, it would be difficult to formalize the informal sector due to its large size, the lack of institutional capacity to monitor informal activity, and for providing much-needed opportunities for the poorest to earn a livelihood.[17] Arguably, these challenges would increasingly apply in the developed world.[18]

Some argue that too much regulation is the underlying problem of informality, and that excessive regulation increases the costs of doing business.[19] Excessive government regulations often set unrealistic standards for formal growth, thus resulting in disproportionate growth in the informal economy.[20] Capital is conceptualized not as the social relations of production, but instead as a "representational process," a process de Soto coined as the "mystery of capital."[21] de Soto attempted to demonstrate how the inability to produce capital is a major barrier to being able to benefit from capitalism.[22] In other words, poor populations in undercapitalized nations lack the ability to materialize capital.[23] Roy described de Soto's "mystery of capital" in the following way:

> In the West . . . every parcel of land, every building, every piece of equipment, or store of inventories is represented in a property document that is the visible sign of a vast hidden process that connects all these assets to the rest of the economy . . . [and] can be used as collateral for credit . . . Third World and former communist nations do not have this representational process. As a result, most of them are undercapitalized . . . Without representations, their assets are dead capital. (p. 22).[24]

Some reject the direct link between the "informal" and the poor, calling into question the negative stigma of the "informal" construct.[25] "Informal knowledge" is something that any human being can acquire; and though some situations might lack legal "formality" in status, this is not to say that there is a lack of organization or absence of form.[26] Socio-spatial practices are always modes of social order regardless of explicit regulations or legal rules.[27] Along this thread of evolved notion of the informal, this study moves beyond the dichotomous construct and explores the role of LVM in operating in this in-between realm of quasi-informality.

Twentieth-century economic trends impacted the evolution of markets in US cities. The introduction of credit cards during the 1960s changed purchasing power for consumers. Private retail centers became increasingly accessible to those in the mainstream economy, thus leaving out sectors of the population that could not, or would not, adapt to this new economic practice. This impacted markets as many

operated entirely on cash transactions. Nevertheless, this study illustrates that traditional ethnic markets, flea markets, and swap meets continued to operate as cash economies.

An increased marginalization of flea markets and swap meets began to emerge with the rise of upper-middle-class markets. While cities ejected the traditional markets out of the city, farmers' markets saw a resurgence in US city centers during the 1970s, and again at the end of the twentieth century.[28] Middle- and upper-middle-class consumers embraced farmers' markets, while the urban poor hung on to the traditional ethnic markets.[29] This switch further reinforces this trend as a displacement targeting the poor, and not specific markets.

Latino Vendor Markets on the Border

Latinos compose one of the largest and fastest-growing ethnic minorities in the US. Yet, the planning literature has paid little attention to their contribution to constructing and appropriating space—more specifically, the connection between the Latino construction of space and the right to the city approach.[30] One pervasive barrier to including this demographic in the literature is a lack of understanding of how these communities socially construct space.[31] Latino vendor markets illustrate the importance of social construction of space, and they are key elements of border cities where the intersection of the formal and informal collide. They represent a quasi-informal environment that is manifested in its economic, spatial, and social dimensions.

The study focused on areas with a high concentration of Latinos, our target population. The highest concentration was along the US-Mexico border, with numbers decreasing as we moved north. To capture this reality, the research tested the research design in both border counties (San Diego County, CA, and Cameron County, TX), and in urban contexts further north (Los Angeles County, CA, and Harris County, TX). Two border case studies were selected: the Spring Valley Swap Meet (San Diego County, California) and the Seventy-Seven Flea Market (Cameron County, Texas). For the two northern case studies, the study selected the Roadium Open Air Market (Los Angeles County, California) and Sunny Flea Market (Harris County, Texas).

The selected case study markets were visited over four months during the spring and summer of 2015. Primary data collected included on-site observations, 198 vendor and customer surveys, and four key informant interviews with market management and city planning officials. Secondary data used in the analysis included US Census data, Reference USA, Yelp, business websites, and vendors' and market-related Facebook pages. Survey instruments were created to help define the profile of the spatial and human dimensions at the markets, basing questions on variables explored in other market studies.

On-site observations of both vendors and customers were recorded through photography, video recordings, head counts, and drawings of spatial-flow patterns. The fieldwork data collection also included audio recordings of announcements to

capture the frequency and content of the management's actions. City officials and market management were interviewed using a predesigned interview guide. Interview questions for city officials focused on identifying any support or resources the city provided to the markets. Questions for market management focused on identifying market support for vendors and the history of physical improvements to the markets.

Quasi-Informality within Latino Vendor Markets

LVMs represent a quasi-informal environment that is manifested in its economic, spatial, and social dimensions. The following sections outline key findings from the research that support how LVM operate through an in-between state of informality. They are both formal and informal, and this quasi-informal intersectionality allows for the unfolding of a place of significance for the Latino community.

Economic

The selected case studies have been operating as established businesses for a range of thirty to forty years; the Los Angeles County market has been operating even longer for over fifty years. All four markets must abide by a complex system of regulations with policies at the local, state, and federal level. Furthermore, each market's management enforces on-site rules guiding the functioning of each market.

The study found that a key role for management is to serve as an enforcer of regulatory provisions that apply to vendors. For example, one way the management filters is by checking that vendors entering the market have a federal tax I.D. number to ensure that they are operating a registered business. Furthermore, local municipalities have policing power of enforcement. According to the study survey, 86% of vendors stated they need a permit to operate a business at the market, and of these, 97% stated they had a permit and were in compliance.

Permitting compliance differs by state. Under California law, the State Board of Equalization (BOE) requires vendors to sell more than two times in twelve months to obtain a seller's permit. These permits require the filing of sales as income tax with the California Franchise Tax Board and the US Internal Revenue Service (IRS).[38] The State of Texas does not have a state income tax; therefore, reporting of sales revenues is required only at the federal level to the IRS. Both Texas case studies require vendors to have a federal tax I.D. number in order to operate a business on site in the markets.

Both California and Texas require prepared food vendors to have health, food, and sanitation permits mandated by the local municipal government. Being in compliance is not a complicated process and is handled easily by vendors at all four markets. According to the study survey, 92% said they obtained their necessary permitting in

less than a month, and the majority (86%) visited their local municipality once to obtain their permit. California has one exception, vendors selling fresh produce or cold food items are not required to obtain a seller's permit as these are considered tax-exempt items.[32]

The management also provides supportive frameworks that ensure the functioning of the markets. They coordinate the movement of vendors in and out of the market, and have the authority to say who can, or cannot, enter. To enter each market, vendors must pass through a checkpoint. Here, the management confirms that vendors have paid their stall rental fee and meet the registration criteria for operating a business at each specific market. In addition to these legal compliances, the markets have a presence on social media.

At the same time, while this evidences that there are rules and regulations in place that are enforced by local governments of the market management, the economic activity that takes place at the markets pushes into the narrative of a quasi-informal economy. The majority of vendors at all four markets conduct cash-only transactions, with no institutionalized mechanism to ensure earnings are reported to the appropriate state or federal tax bureau.

Looking closely at the Cameron County market, we can further understand the significance of this cash quasi-informal economy. The study found that 46% of the vendors sampled earn from $0 to $200 per week at the Cameron County market. This estimate is total earning, not profit. The vendors' second largest response was 38%, with estimated earnings ranging from $201 to $400 per week. While only 8% of the vendor respondents stated to have earnings of over $1000, this "outlier" shows the possibility of more substantial earning potential. Figure 22.1 shows a breakdown of estimated weekly earning by vendors based on market occupancy and declared earning by the vendor sample. Based on this estimate, aggregate earnings by vendors are approximately $276,000–$508,000 each weekend. Converting this estimate to yearly earnings, the study estimates a $14.3 million to $26.4 million dollars cash economy through vendor earnings in this market (Fig. 22.1).

Weekly earnings at the market	Sample Percentage	Sample Percentage x Market Occupancy	Minimum	Maximum
$0-$200	46%	583	$0	$116,508.33
$201-$400	38%	477	$95,801.63	$190,650.00
$401-$600	0%	0	$0	$0
$601-$800	4%	53	$31,827.96	$42,366.67
$801-$1,000	4%	53	$42,419.63	$52,958.33
>$1000	8%	106	$106,022.58	$106,022.58
TOTAL	100%	1271	$276,071.79	$508,505.92

Fig. 22.1 Estimated Aggregate Weekly Earning at the Cameron County Market by Vendors. *Author* Edna Ely-Ledesma

Spatial

A key element of the quasi-informality of LVM is its spatial organization. LVM are temporary and open-air, and most only operate on the weekend. While the markets are mostly open fields, there are some buildings on site that contribute to the functioning of the markets. There is a management office and public restrooms at all four markets. Except for the Cameron County case study, all markets have a kitchen building on-site for food vendors to cook and prepare food.

On-site storage facilities, typically found along one aisle at each of the markets, offer some vendors the opportunity to leave merchandise and supplies on-site at three of the case study sites. The Texas cases lease minimal lockable vendor stalls, 13% (Harris County) and 8% (Cameron County) of their leasable stalls. The Los Angeles County market uses converted shipping containers as lockable stalls; these account for 8% of their total stalls. The Harris County market had the highest occupancy rate of lockable stalls (96%), followed by Los Angeles County (75%) and Cameron County (63%). These lockable stalls compose a minimal portion of the markets' capacity and add a degree of permanence to the language of place. The markets are more than open fields, and these amenities relate to their legacy as markets.

The daily turnover of the market setup requires an end-of-day cleaning operation for the market management staff. Trash containers are found along all the market aisles. Waste left on site by vendors include cardboard boxes and discarded items such as used clothing. Paid market staff are responsible for sweeping the market grounds in the evening in preparation for the next business day. The Cameron County case is an exception in that it requires vendors to take their own trash out of the market. Trashcans, only available at rest areas, are for the use of customers only. According to a vendor questionnaire respondent, if vendors are caught leaving their trash on-site, they are subject to a fine.

On-site utilities for vendors are minimal. Running water is only available for permanent structures such as kitchens and bathrooms. Vendors operating out of food trucks bring in their own water supply. Electrical supply is different at each market. The Texas cases have electrical outlets integrated into the shed structural columns. The Cameron County case charges a fee for electrical use, while the Harris County market supplies it at no charge to vendors. The California markets have electrical outlets at the center of the market and distribute electrical supplies to vendors through extension cords. At all four markets, it is common for vendors to provide their own electricity through a portable generator. The noise produced by the generators is typically overpowered by loud playing music.

As a common observation, the older aisles in the markets are paved and it is where core amenities are located. Areas in the markets that are unpaved are newer and less developed. For example, the unpaved vending areas in the Cameron County market lease at a cheaper rate, allowing for the newest, lower-income immigrants to rent stalls at an accessible rate. A portion of parking and vehicular circulation is unpaved at all markets except the Los Angeles County case. These areas are generally used for overflow vending or parking for vendors.

As a common feature, vendors face a pedestrian promenade through which customers circulate. The Los Angeles County market is an exception with a radial layout; however, it follows the same spatial principles of vendor-pedestrian adjacencies. In Texas, vending stalls and pedestrian promenades are generally located under a permanent, covered shed, open-air roof structure (Fig. 22.2). The California stalls are uncovered, but vendors use a variety of canopy shading structures to cover their space; however, the pedestrian walkways are typically uncovered (Fig. 22.3). The light gray areas highlight the pedestrian promenade; the dark gray highlight covered areas at the market. Weather protection in open-air markets is an important element when describing the language of place. The shed roofs in Texas give equal protection to vendors and customers, while the California case primarily focuses on the weather protection of vendors.

Vendors typically enter the market in moving trucks or minivans filled with their goods for sale (Fig. 22.4). The goods tend to be strategically stored in plastic bins and boxes in ways that facilitate ease of setup at the market stalls. Items are typically stacked and displayed in an orderly fashion. In a matter of hours, vendors convert an empty parking lot or simple shed structures into a meticulously ordered marketplace awaiting users (Fig. 22.5). 80% of vendors at the markets setup and dissemble their stalls every weekend; the remaining sample leave their merchandise stored in lockable stalls. According to the survey, 65% of the vendors are typically at the market an average of six to nine hours per day.
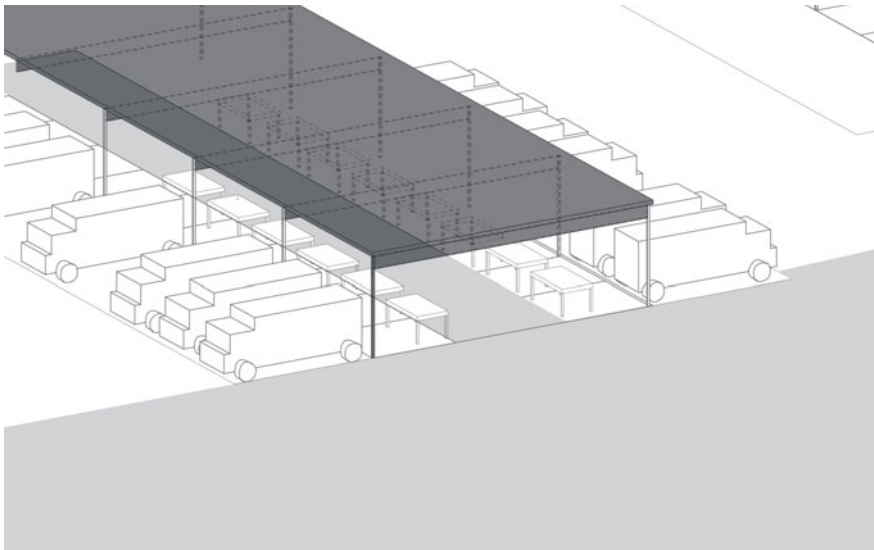
Fig. 22.2 Typical Isle and Shed Structure for Texas Markets. *Drawing* Edna Ely-Ledesma
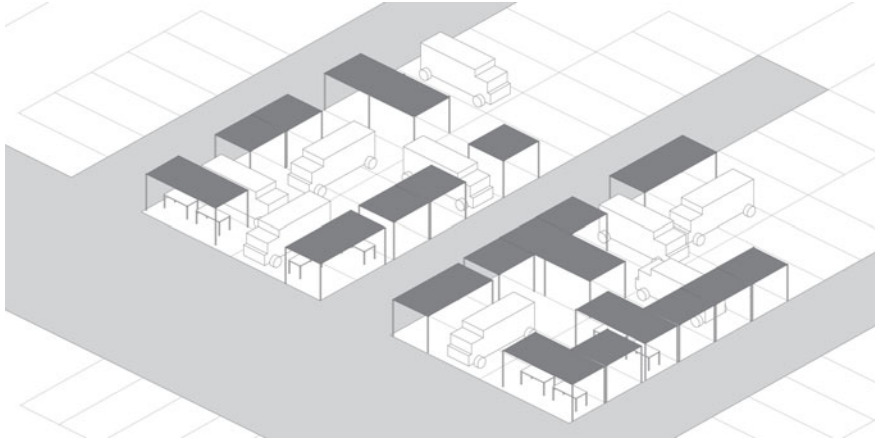
Fig. 22.3 Typical Isle and Canopy for California Markets. *Drawing* Edna Ely-Ledesma

Social

Ultimately, the economic and spatial language of LVMs is the foundation for the unfolding of perhaps the most critical element of this quasi-informal environment, its social fabric. The distribution of the market facilitates flow, and it follows a prescribed order that is enriched by the variety of vending on site. The market distribution does not necessarily make these markets Latino; however, their inhabitation in high concentrations, a result of the layout, allows for the socialization and interaction of predominantly Latino vendors, customers, and institutions on site. This quasi-informal, in-between space allows for a mixing of people at LVM that arguably fosters human connection. People go to good places to experience other people.[33]

All four market managements use staff to control the movement of people and vehicles into the markets; the Cameron County market is a unique case as it uses paid city police officers. Customer vehicles entering the market parking areas must pay a market entry fee at both in-land markets; parking is free on the border markets. The Los Angeles County market also provides a free bus shuttle as an amenity for customers that choose to park at an off-site parking area. The private bus service is operated and maintained by the management. Customer walk-ins pay an entry fee at the California markets; market staff operate these entry gates.

The functioning of the markets is complex. The composite of the spatial elements is a structured market layout; the negative space, areas not occupied by vending and amenity, support movement and socialization. A key characteristic of these spaces is that they are essentially open fields with minimal structures on site; the markets arguably come to life and become places through the infill of people, goods, and services. This is critical to understanding how the interrelationship between economic and spatial dimensions reinforces a dynamic social fabric.

Fig. 22.4 Vendor at the San Diego County Market Loads his Van at the End of the day. *Photo* Edna Ely-Ledesma

Fig. 22.5 Fruit Vendor Stall at the Los Angeles County Market. *Photo* Edna Ely-Ledesma

People flow along the market aisles and have opportunities to rest in designated seating areas. On-site fixtures such as benches, tables, and shading structures help define passive areas for rest and mingling. Market aisle intersections are places for social opportunity, interacting, and activities often capitalize on crossings and sell food. The Texas markets have designated rest areas at aisle intersections (Fig. 22.6), while the California markets have a primary resting area located centrally adjacent to the management office (Fig. 22.7). The total number of designated rest areas is: 27 at the Cameron County market, 15 at the Harris County market, one at the San Diego County market, and one at the Los Angeles market. The design of the Texas markets gives more priority to resting than the California markets. In the Cameron County market, the shed roof raises three feet above the roofline to reveal a grander space. The Harris County market applies the same architectural detail of raising the roofline, but in addition, it uses welcoming signage, animal statues, and paintings to adorn the rest areas.

Conclusion

This chapter rejects the traditional dichotomous construct of informality and explores the role of Latino vendor markets (LVM) as operating in the in-between realm of

Cameron County Market

Harris County Market

Fig. 22.6 Typical Rest Areas for the Texas Markets. *Photo* Edna Ely-Ledesma

San Diego County Market

Los Angeles County Market

Fig. 22.7 Typical Rest Areas for the California Markets. *Photos* Edna Ely-Ledesma

quasi-informality. By exploring four LVM in California and Texas, the study found that these markets attract Latinos and open spaces transform into vibrant city places. As the majority of the people that live in the selected areas of study are Latino, these are places that are absorbed by Latino communities, and the quasi-informal nature of their economic and spatial dimensions allows for the unfolding of a safe, Latino-centric environment that facilitates socializing and gathering. This is critical to understanding how the interrelationship between economic and spatial dimensions reinforces a dynamic social fabric.

LVM illustrate the importance of social construction of space; they are key elements of border cities where the intersection of the formal and informal collide. They represent a quasi-informal environment that is manifested in its economic, spatial, and social dimensions. LVM are an important component of American city culture that must be valued and understood when considering the future of the twenty-first-century US city.

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Chapter 23
Houston, Informal City

Gregory Marinic

Abstract Houston is widely known as the only major city in the United States without zoning. It is also considered among the most ethnically diverse metropolitan areas in the country as well as its most extreme example of uncontrolled suburbanization. Frontier origins and oil industry influences have produced a vast city built primarily through speculation and sporadic land development. Unique among American cities in the scale and complexity of its sprawl, one must look closer at Houston to understand how resilience exists within such seemingly adverse conditions. On the one hand, Houston's informal urban form plays a key role in positively transforming the lives of its lowest income residents. On the other, its built environment is defined by unique parameters that challenge people with heightened impacts of climate change and sprawl. This chapter examines the social, economic, and political forces that have shaped Houston since the late 1970s. It applies the socio-spatial perspectives of Henri Lefebvre, Michel Foucault, Michel de Certeau, Albert Pope, Lars Lerup, Manuel DeLanda, and James Wines to demonstrate how over-building and obsolescence have created unlikely opportunities for bottom-up innovation, entrepreneurship, inclusion, and resilience. This research analyzes multifaceted processes of production and authorship in the built environment framed through informality and socio-spatial theories. It defines twelve socio-spatial exemplars—*conditions of informality*—to describe various building typologies, spatial characteristics, and informalization processes found throughout the Houston metropolitan area. This study resituates Houston no longer as the embodiment of the anti-city or the non-city, but as a city of the masses shaped by tensions between formality and informality in the Global North.

Keywords Houston · Informal urbanization · Spatial production · Suburbia · Obsolescence · Appropriation

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Houston is widely known as the only major city in the United States without zoning. It is also considered among the most ethnically diverse metropolitan areas in the country as well as its most extreme example of uncontrolled suburbanization. Frontier origins and oil industry influences have produced a vast city built primarily through speculation and sporadic land development. Expanding rapidly after World War II, peripheral zones exemplify the impact of ambition and unplanned growth. A seemingly endless aggregation of gas stations, strip centers, shopping malls, and fast-food restaurants abuts residential zones ranging from aging apartment complexes to exclusive single-family enclaves. Unregulated overbuilding on flood-prone land has created large swaths of abandonment that randomly perforate a sprawling metropolitan area.

Given that urban morphology is concerned with identifying the processes and outcomes of spatial production, Houston must be primarily understood as a consequence of organic processes. Unique among American cities in the scale and complexity of its sprawl, one must look closer at Houston to understand how resilience exists within such seemingly adverse conditions. Here, laissez-faire capitalism and no planning converge with a fragile geography and remarkable ethnic diversity to shape a largely informal city in the Global North. On the one hand, Houston's informal urban form plays a key role in positively transforming the lives of its lowest income residents. On the other, its built environment is defined by parameters that challenge people with heightened impacts of climate change and sprawl.

Applying the socio-spatial perspectives of Henri Lefebvre, Michel Foucault, Michel de Certeau, Albert Pope, Lars Lerup, and Manuel DeLanda, this research explores how overbuilding and obsolescence have created unlikely opportunities for bottom-up innovation, entrepreneurship, inclusion, and resilience. Looking to Lefebvre, Houston may be viewed as a rereading of *Right to the City*;[1] while in relation to Foucault, the city may be framed through the lens of his book, *Of Other Spaces*.[2] Applying the quotidian ruminations of de Certeau in *The Practice of Everyday Life*, Houston can be assessed as a memoryscape that acquires new meanings, while for Pope, in *Ladders*, and Lerup in *One Million Acres & No Zoning,*[3] Houston's under-theorized socio-spatial complexity requires a specific vocabulary to describe its unique urban forms. Furthermore, the assemblage thinking of DeLanda can be used to situate Houston as a 'space of possibilities' where informality operates much like the medieval city. Here, collage-like contributions and alterations shape the city through a process of continual becoming.

Building on these ideas, this chapter identifies Houston as a laboratory for understanding the challenges and opportunities of twenty-first century decentralized urbanism and unregulated cities across the globe. It examines the social, economic, and political forces that have influenced Houston since the late 1970s as multi-faceted processes of production framed through informality and socio-spatial theories. This study defines twelve socio-spatial exemplars—*conditions of informality*—to describe various building typologies, spatial characteristics, and informalization processes found throughout the metropolitan area. It resituates Houston no longer as the embodiment of the anti-city or the non-city, but as a city of the masses shaped by tensions between the formal and the informal in the Global North.

A Brief History of Houston

Houston was settled in 1837 at Allen Landing on land along Buffalo Bayou that was once home to the Karankawa and Atakapa people.[4] From its inception, the city was conceived as an experiment in real estate speculation. In 1836, the Allen brothers— John Kirby Allen and Augustus Chapman Allen—acquired land that would become Houston at the junction of Buffalo and White Oak Bayous. In its early years, Houston served as the capital city of the Republic of Texas and slowly grew into a regional transportation hub. Its population stood was 58,203 in 1900,[5] the same year in which a devastating hurricane hits coastal Galveston. That disaster left behind one of the worst natural disasters in American history and more than 8000 people dead.[6]

In 1901, wildcatters dug wells at Spindletop which set the stage for Houston becoming a regional petroleum center and base for new oil companies.[7] Likewise, the tragedy at Galveston catalyzed the development of a deep-water channel connecting inland Houston to the Gulf of Mexico. In 1914, the opening of the Houston ship channel created a pivotal infrastructure that drew shipping and economic activity away from Galveston. Together, the deep-water port and fledgling oil industry, coupled with a car-oriented lifestyle, began to transform the built environment of Houston in the years before World War II.

Annexation was the primary method of urban expansion for Houston from 1900 until 1956 when the city achieved its largest single annexation.[8] In 1956, the city of Houston annexed 185 square miles which included land that would be used to develop Houston Intercontinental Airport and the Lake Houston reservoir.[9] Through this process, the city acquired 30 water improvement districts and 60 utility companies with the intent of controlling water, sewage, and drainage across an expansive territory.[10] By 1960, Houston sprawled across 350 square miles with a population of nearly one million residents.[11]

The rapid population growth of Houston after 1960 coincided with the enactment of the *Immigration and Nationality Act of 1965*. This law abolished a racially, ethnically, and religiously exclusionary quota system dating from 1924 by removing de facto discrimination and barriers to immigration placed against southern and eastern Europeans, Asians, Africans, Middle Easterners, and other non-northwest European ethnic groups.[12] Since then, immigration policy in the United States has been privileged toward skills, family relationships, and geographic diversity. After the establishment of this law, the United States incrementally witnessed an unprecedented diversification of its social, cultural, and ethnic geographies.[13]

The impact of liberalized immigration policies is visible in the remarkable multicultural diversity of Houston. The city has embraced immigrants from around the world as well as refugees from Vietnam, Cambodia, Bhutan, Bosnia, Syria, Afghanistan, Central America, and elsewhere. Immigration and refugee resettlement have fundamentally enriched and reshaped the built environment of Houston. A process of ongoing ethnic succession has transformed the city from predominantly white into a post-1965 multiethnic plurality including immigrants and their multigenerational descendants. Immigrants and refugees have typically settled in peripheral

neighborhoods characterized by aging retail strips and overbuilt real estate with residential densities ranging from multifamily apartment complexes to single-family homes. Embodying a mix of affordability and opportunity, these areas are found primarily between two circumferential expressways—the Interstate 610 loop and Beltway 8—as well as in many areas beyond Beltway 8.

A Periphery in Transition

The American city has evolved through time into a complex socio-spatial construct formed by shifting values, practices, perceptions, and forms of production.[14] In the post-World War II years of the early 1950s, urban life in the United States began fracturing and dispersing along racial and socio-economic lines. Rapid changes resulted in the dramatic collapse of city centers, and the social connectivity that they had historically fostered. Many factors contributed to the gutting of commercial activities and populations from urban cores as white flight escalated to suburbia.[15] Fueled by redlining, urban renewal, and freeway building, as well as the latent effects of racism and de facto segregation, suburbia grew alongside the simultaneous rise of post-war popular culture and new forms of consumption.

The American dream of the mid-twentieth century was expressed in single-family home ownership and car dependence.[16] These desires resulted in the widespread transference of commercial and social experiences from city centers to suburbs. As daily life became increasingly privatized in suburbia, housing subdivisions and shopping malls became icons of American culture that represented the United States to the world and Americans to themselves. Although built on the premise of racial and socio-economic exclusion, suburbs were mostly Americans of all ethnic backgrounds wanted to live. Since that time, the United States has continuously exported its suburban culture to the rest of the world, while American suburbia has become increasingly more diverse and globalized.

In late 1990s, the urban core of Houston became a nexus of development and densification, while many peripheral areas began to experience increasing disinvestment and decline. As the downtown core and adjacent districts have gentrified, suburban retail corridors and residential areas have succumbed to greater obsolescence. The 2020 US census revealed that peripheral Houston has become globalized by immigrants and their second- and third-generation offspring. And although undercurrents of racial, economic, and social segregation persist, suburbia has been hybridized into a place of opportunity with vibrant informal economies and diverse forms of spatial production. Racial homogeneity and social conformity, defined by a shrinking white middle class for whom these areas were originally built in the 1970s through the early 90s, have considerably diminished. Disinvestment has fueled the emergence of places of otherness through less formal occupancies and alternative consumption patterns.

Today, the urban form of Houston remains fragmented and car dependent, while continuing to evolve through largely unplanned methods of urbanization and significant obsolescence. Within such seemingly adverse conditions, *heterotopias*—or spaces of shared ethnic, social, or cultural experience—generate bottom-up adaptations of an overbuilt suburban landscape. Former bastions of white middle class suburbia have given way to a multicultural geography of blended heterotopias that organically grow in response to changing demographics and socio-economic needs. Globalization and adaptation have established new normative conditions achieved though notably informal tactics like cities in the Global South. Small-scale informal interventions act as autonomous agents of resilience meeting diverse human needs, daily routines, social desires, and cultural expectations. This contemporary form of suburbia rejects uniformity and conventional assumptions about upward mobility; decline has made space for informal occupancies and the economies that fuel them. Moving away from social and commercial homogeneity, as well as the actions of planners, architects, developers, national retailers, and homeowners' associations, Houston's periphery increasingly self-builds itself into a more socially resilient environment.

Otherness and Heterotopias

In *The Production of Space,* Henri Lefebvre describes a critical shift in spatial perspective by identifying multifaceted processes of production that acknowledge multiplicity of authorship in the built environment.[17] Lefebvre asserts that cities, buildings, and interior spaces are ultimately products of social practices. As a Marxist theorist who was highly critical of the structuralism that dominated the academic discourse of his time, Lefebvre argues that the *everyday* manipulation of space is fundamental to the growth of society, and thus, to shaping the city. An embrace of such theory implies distrust of the heroic, formal, and fashionable, as well as suspicion of architecture that acts as an agent of commodification.[18] Reframing architecture with the inverse—the everyday impact of people reshaping buildings—Lefebvre celebrates the commonplace and unschooled manipulations that buildings and cities receive apart from the top-down hand of architects, planners, designers, and developers.[19] He fixes his gaze on the lives of buildings well beyond the moment of their completion. Unlike the formalized ritual of architecture, everyday manipulations are anonymous, layered, and imprecise. They exist as contradictions, contributions, and collaborations.[20]

As globalism and social media have transformed the notion of territory, the contemporary relevance of utopianism has given way to ersatz utopias, or heterotopias, that achieve similar effects through informal means. Michel Foucault employed the term *heterotopia* to describe environments that intermingle multifaceted layers of meaning, as well as simultaneity and connectivity to other places. As

worlds of otherness, these spaces engage with the physical, mental, and phenomenological characteristics of memory.[21] Heterotopias appropriate aspects of remembrance to remanifest and approximate physical places among a shared people. They satisfy the basic human desire to claim, territorialize, redefine, and provide security, and thus, they embody a vital form of socio-spatial resilience.

Today, the production of space in the globalized periphery of Houston percolates up rather than trickles down, arguably offering greater flexibility, self-sufficiency, and long-term viability. Adaptation of outmoded 1970s retail strips, shopping malls, and apartment complexes challenges the notion that such places are obsolete. Physically and psychologically isolated from the gentrified downtown core and inner loop, small-scale interventions reject conventional assumptions about suburbia. Synthesizing into spaces of otherness, these emergent heterotopias are vibrant places built on compromise that create unique opportunities for economic freedom and assimilation. Nevertheless, ever-expanding sprawl in the outer periphery creates ongoing challenges for urban connectivity, social cohesion, and ecology.

Finding Opportunity in Obsolescence

For marginalized populations, survival is based on the ability for a community to reorganize and remake itself socially, economically, and spatially. In suburbia, resilience takes on a social dimension linked to existing building stock, reuse, and re-investment, as well as associated redundancies that mitigate the potential for economic collapse. Houston developed throughout the post-World War II years in a series of discontinuous bands of residential, commercial, and industrial development. Although fragmented and diversified, these zones are embedded with the institutional memory of a first generation that was predominantly middle class and ethnically white. The socio-spatial uniqueness of Houston requires theoretical analysis to unfold its evolution. The theories of Michel de Certeau, Albert Pope, Lars Lerup, and Manuel DeLanda can be applied to examine the intersectional complexities of Houston.

In *The Practice of Everyday Life*, Michel de Certeau proposes that navigating a city has its own rhetoric, allowing people to chart their own subjective uses for space. He illustrates the idea of tactics to understand and theorize the everyday city whereby tactics of resistance are contrasted with the strategies of those in power. His *concept city* embodies the strategies of the powerful—an elite who imposes their desire for hegemony by using their power to suppress difference. For de Certeau, walking the city allows people to create their own associations, to appropriate places and to give them new meanings. As people pass through urban space, de Certeau proposes that their movements link actions to footsteps, opening pathways that diminish the primary roles of existing spaces. These places, then, become liberated for reoccupation and regeneration by others. Spaces such as these emerge continuously across the overbuilt suburban periphery of Houston.

The ideas of de Certeau are reinforced by the site-specific postulations of Albert Pope in his seminal book, *Ladders*. Through his assessment of peripheral Houston, Pope posits that, '...inaccessibility exists for the simple reason that the characteristic spaces of the contemporary city are not identifiable entities, but rather are absences, gaps, lacunae, hiatuses, or ellipses that our commodity-bound words, buildings, and "places" are unable to account for.' Pope draws specific attention to the, '...vast parking lots, continuous or sporadic zones of urban decay, undeveloped or razed parcels, huge public parks, corporate plazas, high-speed roads, and urban express-ways, the now requisite *cordon sanitaire* surrounding office parks, industrial parks, theme parks, malls, and subdivisions are all spaces which have failed to become the focus of significant investigation.' He laments that these indeterminate spaces remain virtually unseen and under-theorized. Similarly, in *One Million Acres & No Zoning*, Lars Lerup argues that Houston is neither a city nor a metropolis but proposes a third way among American cities.[22] For him, Houston has never met its utopian ambitions but is 'more conducive to undisturbed personal perception than others.' In a chapter examining Houston as a 'self-organizing city', Lerup reflects on the developer-driven nature of Houston as a consequence of speculation. Constraints imposed by financing, politics, and consumption illustrate why developers make their decisions, and thus, how the city is ultimately shaped through laissez-faire processes.

Furthermore, Houston can also be viewed through the assemblage theory of Manuel DeLanda who situates urban environments as the site of continual processes of building and unbuilding. Unzoned Houston, therefore, can be theorized by what DeLanda calls the 'space of possibilities' in which unregulated processes of urbanization and deformalization create spaces and buildings that remain unfinished, specu-lative, porous, and full of potential. Like the informal urbanisms of the Global South, his assemblage thinking applies to Houston in its affordance of diverse, unstructured spatial patterns that encourage unregulated occupancies and functions.

Considering the ideas of de Certeau, Albert Pope, Lerup, and DeLanda, much of the outer periphery in Houston contrasts considerably with its demographic and formal origins. Unstructured and visually disorganized, peripheral Houston have become increasingly organic—intermingling the subtleties of past usage patterns with marks of more recent informal shifts. Today, the disinvested suburban envi-ronment encountered by immigrants and refugees allows an informal economy to percolate and prosper. Within this architecturally unremarkable drosscape,[23] modest community needs shape an *everyday* built environment leveraged through an acces-sible cache of undervalued buildings and neighborhoods. In this city, the tactics of the masses confront a long history of misdeeds of the powerful.

Considering the impact of immigration on suburbia, the heterotopias of Houston territorialize and redefine space in response to cultural preferences and socio-economic needs. They collectively advocate for their right to the city. Undervalued existing buildings are the primary building block of places of otherness, offering an accessible infrastructure for mercantile activities. Immigrant communities have forged new American identities within the suburban obsolescence of Houston where finely grained retail strips, enclosed shopping malls, abandoned warehouses, and resi-dential streets host supportive heterotopias. Unmonumental and autonomous, such

transformations reflect limited means, as well as the impact of time and collective memory. These areas operate through occupancies and economies more like those found within informal settlements of the Global South.

Conditions of Informality

Although, the idea of fostering resilience in urban infrastructure is a strategic theme and operational goal for cities worldwide, scholars and practitioners in various disciplines struggle to define how to achieve it in their respective fields.[24] What does resilience mean in relation to existing buildings, and more specifically, how can it be accomplished in suburbia through informal means? As architects and planners explore prescriptive models to guide resilient practices at the metropolitan scale, the socio-economic dimensions of resilience have become increasingly relevant at smaller scales.[25] In recent years, the concept of resilience has shifted away from anticipation of risk and mitigation, and toward a more integrated and incremental model that promotes protective and preventative strategies.[26] Conventional and low-tech approaches to resistance are increasingly linked to more responsive and regenerative aspects of resilience.[27]

Greater Houston is a sprawling metropolis, where the informal economy and global diversity intersect to create unique socio-spatial conditions reflecting organic, responsive, and regenerative forms of resilience. As discussed herein, peripheral areas of the city are largely shaped by ongoing processes of obsolescence and appropriation. *Becoming* in this context is primarily about change and adaptation rather than a deliberate march toward formality. These phenomena have resulted from shifts in production and consumption across a continually expanding territory that grew primarily through aggressive annexation and speculative development practices. Formerly defined by default through white suburban homogeneity, no zoning has afforded Houston the means to evolve into a hybridized place of multicultural urbanity.

My ongoing research and extensive field work study the socio-spatial evolution of Houston through an informal lens. This research responds to Pope's sentiment that indeterminate spaces have been under-theorized and extends Lars Lerup's call for a "unique vocabulary" to define the specific urban forms of the city. The following twelve conditions of informality demonstrate the ongoing transformation of Houston:

- The (repurposed) warehouse
- The (appropriated) strip
- The (adapted) ,all
- The (deformalized) department dtore
- The (globalized) apartment complex
- The (commercialized) house
- The (monetized) parking lot
- The (multicultured) office building
- The (abandoned) townscape

- The (undocumented) trailer park
- The (borrowed) utility easement
- The (haunted) landscape.

While these 'conditions of informality' are manifested in diverse ways, a site-specific example of each has been provided herein. These conditions continually emerge across Greater Houston through obsolescence and indeterminacy. Most of these spatial forms house commercial, retail, and residential functions. Others operate as landscapes that transform indeterminate zones into transactional spaces. Together, they are widely dispersed and often catalyze the growth of each other through physical proximity. The twelve primary conditions embody environments that operate through deformalized, informal, and quasi-formal processes. Some of the exemplars presented herein exist directly adjacent to one another.

(1) **The (repurposed) warehouse**

Houston is a nexus of intercontinental shipping and human migration from across the US and around the globe. As a port city, Houston requires vast territories for storing goods and its warehouses take many forms. Some are purpose-built for industrial operations, while others serve wholesale trading. Still others serve as temporary storage that supports residents and new arrivals who are constantly on the move. Warehousing is also achieved in buildings not purpose-built for such purposes. Former office towers, obsolete hotels, and vacant strip malls serve their final years storing goods before ultimately being demolished.

Since the 1980s, the Kingspoint area surrounding Almeda Mall area has transitioned from a predominantly white middle class community to a primarily Latino working class heterotopia of aspiration with a growing middle class. A particularly dramatic transformation is The Mullet, a graffiti center (Fig. 23.1) that formerly occupied a repurposed warehouse, as well as the exterior walls of an adjacent semi-abandoned strip mall. The Mullet once billed itself as the largest graffiti art center in Houston. It was open to the public and included an art supply shop that sold graffiti supplies and artwork. Creative remnants sheath the backside of an adjacent strip mall that is slowly being abandoned. These outdoor spaces once embodied a form of appropriated public space that fostered participatory art installations and outdoor performances. Today, its loading dock and service entrances remain transformed by murals of The Mullet. In 2014, the founder of The Mullet, Johnathan Estes, was murdered at the warehouse by armed assailants. Estes's labor of love remains empty as fading graffiti murals memorialize his vision for this once vibrant place.

(2) **The (appropriated) strip**

The everyday shopping strip, or strip mall, is a form of drosscape architecture defined by its spontaneous and anonymous development. Like other American storefront typologies, strip malls are notable for their functional neutrality. The strip mall is among the most ubiquitous 'vernaculars' in Houston, a quotidian architecture that develops incrementally through speculation. Although derided by architects and

Fig. 23.1 (repurposed) Warehouse|The Mullet, Houston; *Photos* Gregory Marinic

urbanists, the strip mall operates much like an urban retail street by offering a *plug-in* system for quick-start economic opportunity. As a form of junkspace, strip malls are largely undocumented, however, they house a diverse range of functions including retail, sacred spaces, cultural organizations, and restaurants.

The most obsolete strip malls in peripheral Houston largely date from the 1960s and 70s. Built alongside residential subdivisions in a pre-big box era with minimal options, strip malls provided basic retail needs. Big box stores, regional shopping malls, the internet, and the COVID-19 pandemic have increasingly undermined the viability of most early strip malls. The original business models typically found within them—jewelry repair, greeting cards, photographers, printers, optometrists, hardware, paint, wallpaper, pool supplies, and others—have either faded away or been absorbed into big box stores.

In Houston, the most obsolete of strip malls—the perpendicular type—conforms to long plots with short street frontages. The perpendicular strip turns its stores off the street, and thus, has been rejected by national retailers because it offers low visibility, insufficient parking, and low profitability. Its site orientation, however, creates a finely grained retail environment characterized by intimate scale and affordability. Often condemned and overlooked, the everyday perpendicular strip is particularly important to the socio-economic and communal parameters of resilience. Adapted to the idiosyncrasies of a more diverse population, strip malls have fostered an ersatz street culture and publicness within disinvested areas of the city. In these environments, new immigrants find the ability to become economically independent

Fig. 23.2 (appropriated) Strip| Almeda Terrace, Houston; *Photos* Gregory Marinic

through a critical infrastructure that supports entrepreneurship. Less formal occupancies have transformed strip malls into places of *otherness*—'Little' Saigons, Shanghais, Bangkoks, Tegucigalpas, Mexicos, and Colombias are intermingled within suburban placelessness. The livelihoods of multiple families are leveraged upon small investments allowing human relationships to build supportive interdependencies and intergenerational wealth.

Next to the Mullet and across the street from Almeda Mall stands a prototypical example of the perpendicular strip. The semi-abandoned Almeda Terrace (Fig. 23.2) strip mall was partially appropriated by the adjacent Mullet, a former art center housed within a repurposed warehouse. Graffiti artists used the back and side exterior walls of Almeda Terrace as canvases for their craft. Their actions transformed adjacent exterior service spaces between Almeda Terrace and The Mullet into quasi-public spaces.

(3)   **The (adapted) mall**

Built in 1968 by the James Rouse Company, Almeda Mall was the premier regional shopping center in Houston at the time. Its utilitarian architecture reflects the new town planning principles and austere European modern aesthetic of Victor Gruen. Since the 1990s, national retailers have largely left the Almeda Mall for upscale malls. The mall further transitioned in recent years with the re-emergence of downtown, shifting demographics, and rise of online shopping. As mall vacancies rose, immigrant merchants began to provide general services such as remittance offices, travel agencies, clothing stores, nail salons, quinceañera showrooms, and restaurants

serving multiethnic consumers with modest incomes. As independent merchants filled the void, mid-level retail in the surrounding Kingspoint area was largely abandoned. In place of national brands, immigrant merchants carved out space to offer general services near the mall such as clothing stores, pawn shops, car repair garages, and restaurants serving ethnically diverse consumers.

In 2015, a major renovation of Almeda Mall included upgrading flooring, wall surfaces, seating areas, and storefronts. Today, over 75% of its leasable space is occupied by non-national retailers. Abandonment became an economic opportunity for new immigrants to inherit space, territorialize, and reinforce identity through ethnically relevant mercantile activities. Thus, Almeda Mall shows unique aspects of hybridization through ethnic succession, transitioning demographically from white middle class conformity in the 1970s to a predominantly working class Latin American community by the 1990s.

Among the most interesting new aesthetics and occupancies of Almeda Mall was a series of graffiti cube installations that translated the visual cues of the nearby Mullet art warehouse into the mall itself. In 2015, mall corridors housed giant-sized graffiti artworks styled in the manner of The Mullet. This blending of the formerly formal and generic mall interior with a highly localized artist aesthetic embodies the deformalized and global nature of peripheral Houston (Fig. 23.3). In short, the Almeda Mall, The Mullet, Almeda Terrace, former Best Products Indeterminate Façade Building, and their environs have been radically altered to meet new patterns of consumption and an increasingly informal economy in Kingspoint.

Fig. 23.3 (adapted) Mall|Almeda Mall; Houston; *Photos* Gregory Marinic

(4)   **The (deformalized) department store**

Across Greater Houston stand the abandoned or repurposed shells of many shopping malls and department stores. Among these, Sharpstown Mall has seen significant demographic change as its shift from national retailers to local merchants accelerated during the late 1990s and early 2000s. Mid-range national retailers, such as Macy's and JC Penney, left Sharpstown Mall to focus on higher-end alternatives at The Galleria, Willowbrook Mall, and The Woodlands Mall. In 2009, responding to an influx of foreign-born residents in the neighborhood, mall management announced new branding and programming for Sharpstown Mall, changing its name to PlazAmericas, and beginning a major interior reconfiguration of a former department store into Latino City. That department store was redesigned into a Latin American marketplace which belies the generic commercial foundation upon which it was built. Latino City reconfigured the department store interior with independent vendor stalls and mobile carts spatialized in a manner more akin to a flea market or swap meet.

The resulting arrangement reflects the Mexican urban market typology with spatial qualities like the Mercado Juarez in Monterrey. Although no structural changes were made, non-load bearing wall partitions were removed and replaced with metal mesh vendor stalls. Each vendor stall is customized by the tenant with signage, lighting, and interior furnishings. The former department store cavity no longer sells products marketed to a nationwide middle class, rather, 'Latino City' reflects the preferences and more modest buying power of the surrounding community. Its interior spaces support far lower overhead costs as well as higher informality. The new format offers immigrant merchants the opportunity to pursue micro-entrepreneurship through affordable access.

Similarly, a group of individual mall stores was combined into an 83,000 square foot open-plan marketplace for clothing, jewelry, electronics, and home goods called El Mercado. From the standpoint of architecture, the adapted Mercados of PlazAmericas share much in common with indoor market houses in Mexico and Central America, places of origin for most of the merchants. Although PlazAmericas continues to house one large retailer—Burlington Coat Factory housed within the former Montgomery Ward store—along with conventionally-sized retail shops, Latino City and El Mercado demonstrate a remarkable departure from the past. (Fig. 23.4).

In the case of El Mercado, the interior architectural redesign involved the removal of all surface materials and partitions of the former individual stores. The new design includes an interior space with elements that evoke a market plaza in Latin America. Inserted portal arches delineate spatial zones within the reconfigured space using Spanish colonial stylistic influences paired with outdoor light fixtures and park benches. The bare, polished concrete floor feels more like an exterior surface, while the removal of ceiling tiles to expose black-painted HVAC systems makes the ceiling visually recede. Conventional department store space was remade into neutral, free-plan environments serving diverse needs. Designers created small-scale spaces rather than highly articulated environments for national brands. Here, the role of the professional designer has shifted to anticipate and accommodate more modest
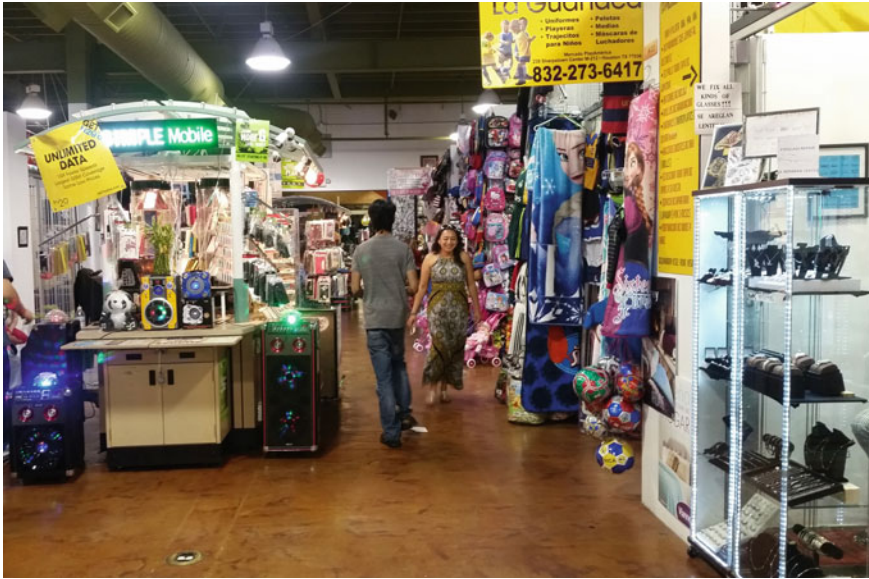
Fig. 23.4 (deformalized) Department Store|PlazAmericas, Houston; *Photo* Gregory Marinic

needs, allowing very small businesses with limited means the ability to shrink or grow in spaces as small as 100 ft^2.

(5) **The (globalized) apartment complex**

Aging apartment complexes built in the 1970s and 80s are ubiquitous throughout the Houston periphery. Suburban corridors are often lined with multifamily housing that creates a transition zone between commercial areas and single-family homes. When these apartment complexes were new, they provided speculative developers an efficient way to quickly house professional workers who migrated to Houston during the oil boom years. Many neighborhoods have suffered from outmigration and disinvestment. Commercial corridors and adjacent apartment complexes are often the most obvious places where such effects occur. Older apartment complexes have experienced not only demographic changes, but also shifts in consumption whereby relative proximities, consumer technologies, and unlimited choice have rendered many of these properties obsolete.

Opportunity exists within obsolescence, and it is often immigrants who see such potential most clearly. Along the flight path to Houston Hobby Airport, Thai Xuan Village (Fig. 23.5) is a Vietnamese heterotopia, one of many similar apartment complexes across the city that have been transformed through ethnic succession. Designed in French Louisiana-style and built in 1976 as the Cavalier Apartments, the complex slowly degraded as a declining economy, white flight, and disinvestment shifted the demographic conditions of Southeast Houston. In 1993, community

Fig. 23.5   (globalized) Apartment complex|Thai Xuan Village, Houston; *Photos* Gregory Marinic

founder Father John Chinh Tran, a Roman Catholic priest, collaborated with a Vietnamese immigrant-owned development company to purchase the property.[28] The 380-unit condominium complex was renamed 'Thai Xuan' in homage to the rural hometown of its new residents.[29] Father Chinh helped to resettle Catholic Vietnamese refugees who purchased their own units at low prices,[30] and then transformed them with self-built interventions. Although Thai Xuan Village has weathered some difficult times, it embodies a village-like heterotopia with unique socio-spatial qualities. Residents have appropriated formerly communal open spaces for private vegetable gardens and outdoor terraces. The deformalized complex now hosts mixed uses including Roman Catholic shrines, a Buddhist temple, a grocery store, banh-mi shops, hair salons, and many other domestic microbusinesses. There is great irony that a Vietnamese community has appropriated French colonial architecture for its home in America. Here, Houston is Little Saigon.

(6)   **The (commercialized) house**

No zoning in Houston means that virtually anything can happen anywhere. Even so, written deed restrictions exist in some areas that limit certain uses, or limit activities that may take place on private property within a residential subdivision. Deed restrictions are established to preserve the exclusively residential character of a subdivision by forbidding commercial and industrial facilities. These private agreements are binding upon every owner in a subdivision, while all future owners are subject to these agreements when they purchase property within deed restricted areas.[31]

Most deed restrictions in Houston have an average life span of 25-to-30 years. Some remain in effect for perpetuity, while others expire. Many deed restrictions contain a provision for automatic renewal beyond the initial 25-to-30-year span unless owners take action to prevent renewal.[32] In neighborhoods where owners prevent renewal, or where property falls out of restriction or has never been governed by deed restrictions, an owner may freely operate a commercial business out of a residential home.[33] In lower income neighborhoods where deed restrictions have expired, commercial activities have bubbled-up within previously uniform residential areas. This is particularly common on once quiet residential streets that have since morphed into busy corridors. Street noise and traffic make corner houses along those corridors less desirable as residences, and at the same time, greater visibility makes them attractive for commercial purposes.

Commercialized houses are common in Houston. A typical example is Garland Drive (Fig. 23.6) in Southeast Houston. Houses along the corridor have been transformed into small businesses providing unique items and services ranging from printing and haircuts to prepared foods and notary services. Commercialized 'houses' exist in many forms other than single-family residences. For example, in the Thai Xuan Village apartment complex, countless domestic industries are based within small apartments selling goods ranging from handmade clothing and baskets; services like hair-cutting, nail finishing, and appliance repair; as well as foods such as pho, banh-mi sandwiches, and baked goods.

Fig. 23.6 (commercialized) House|Garland Drive, Houston; *Photos* Gregory Marinic

(7)   **The (monetized) parking lot**

Underutilized parking lots in Houston are typically monetized without additional investment in one of two ways. On the one hand, through top-down management practices by developers who seek new uses for their underperforming assets. For retail properties that can no longer attract national brands, the parking lot itself becomes the territory to monetize. On the other hand, though bottom-up appropriation by independent actors who introduce new uses ranging from pop-up marketplaces to illicit activities. Both are forms of tactical urbanism that reorient edge space by mobilizing latent resources toward new audiences.

Conventional malls built in Houston during the first and second waves of post-war mall development are generally obsolete, and most have been repurposed, abandoned, or demolished. One prominent example is Greenspoint Mall at the junction of Interstate 45 and Beltway 8 in North Houston. Opening in 1976, Greenspoint was once the largest mall in Greater Houston. By the late 1980s, it began to wane with the oil recession, the arrival of newer malls at Willowbrook and Deerbrook, and a dramatically rising crime rate. Its original anchor stores have closed, while mall shops have shifted from national retailers to primarily local merchants. Although the mall itself is largely dead—exacerbated by online retail competition and the COVID-19 pandemic—its massive parking lot hosts new activities such as carnivals and motorcycle meet-ups.

Just south of Greenspoint Mall, the fringes of the Walmart Supercenter parking lot (Fig. 23.7) are often appropriated by unsanctioned activities that operate out of cars, pickup trucks, or tents. Here, a big box store parking lot serves as an unlikely

Fig. 23.7   (monetized) Parking lot | Greater Greenspoint, Houston; *Photo* Gregory Marinic

node supporting the growth of mercantile, social, and cultural activities. Taking cues from the informal city, parking lots afford farmers and merchants the ability to sell agricultural products, prepared foods, textiles, and other goods directly from their vehicles. These informal activities offer new layers of public life that contrast significantly with the past.

(8)   **The (multicultured) office building**

Widely known as Hillcroft, the Mahtma Gandhi District is a predominantly Indian and Pakistani ethnic enclave in Southwest Houston that forms the largest South Asian commercial district in Texas and among the largest in the US. The district began its ethnic transformation in 1983 when a local Indian merchant, Rupa Vyas, established an Indian grocery store in the neighborhood. Before this time, the demographics of Hillcroft were much like the adjacent Galleria area. Hillcroft is geographically an extension of that district and its shared 1960s modernist architecture underscores this relationship. The neighborhood is home to an architectural icon that has been largely overlooked by the public. The Hillcroft Professional Building (1967) at 3838 Hillcroft Avenue (Fig. 23.8) was designed by prominent local architect William Jenkins (1925–1989), a graduate of the architecture schools at the University of Houston and Texas A&M University who later served as Dean of the University of Houston

Fig. 23.8 (multicultured) Office Building|Hillcroft Professional Building, Houston; *Photos* Gregory Marinic

College of Architecture in the late 1970s and early 80s.[34] His architecture practice—Jenkins, Hoff, Ober, Saxe—produced many prominent modernist buildings across the city.

Today, the Hillcroft Professional Building serves much different uses than it did upon opening in 1967. Falling into neglect and disrepair, the building is no longer Class A office space with upper floors that remain largely empty. Its Brutalist aesthetic is unfashionable but remains revered by local architects, critics, design aficionados, and the cultural elite. Decay, however, has deformalized the building and made space for new opportunities. The ground floor has been transformed with ethnic shops, while its underused parking lot hosts La Pulgita Loca, a Latino vendor marketplace open only on weekends, and the vendor market offers all manner of goods from t-shirts and quinceañera dresses to groceries and pets. Informalization has turned an austere Brutalist icon into a place of multicultural publicness.

(9)   **The (abandoned) townscape**

In the 1960s, shopping and entertainment became increasingly blended activities. The ethnographic villages of world's fairs and themed amusement parks became provocations for developing more everyday environments with similar effects. Space age futurism ran parallel to increasing nostalgia in historicism. Both styles exhibited high-low variation between more vernacular and accessible types—fast-food restaurants, bowling alleys, and shopping centers—and a more curated high style that fused popular culture with architecture. These trends set the stage for increasing retail experimentation. The mixing of fantasy with retail ushered in a brief era of vaguely European or New Orleans-inspired shopping-dining-living villages that were built in suburban areas of major cities across the United States such as La Place in Cleveland, Ohio; The Continent in Columbus, Ohio; Alpine Village in Torrance, California; and Cinder Alley at Cinderella City Mall in Englewood, Colorado. The design of these whimsical, town-like environments was subtly anti-urban and primarily marketed to the bourgeois tastes of a suburban middle class. Most of these places no longer exist in their original forms, while some have evolved into transgressive places.

On the west side of Houston, Westbury Square (Fig. 23.9) dates from 1963 and embodies this thematic shopping village retail trend of the 1960s. Inspired by an Italian village, it was developed by Ira Berne on a vacant tract of land in the Westbury housing subdivision. Over fifty shops, boutiques, and restaurants were set amidst brick pathways, gardens, and a fountain square selling international goods ranging from fashion to handmade collectibles. Westbury Square was extremely popular in its time but began declining after The Galleria, another Italian-inspired shopping experience—this one paying homage to its Milan namesake—opened in 1970. By the mid-1990s, almost half of Westbury Square was demolished to make way for a Home Depot store. Today, the remaining half is abandoned apart from being lived in by squatters who use off-grid electricity and portable toilets. Overgrown with vegetation and crumbling beyond repair, Westbury Square looks not unlike a war-torn and appropriated European village.

Fig. 23.9 (abandoned) Townscape|Westbury Square; *Photo* Gregory Marinic

(10)   **The (undocumented) trailer park**

Trailer parks, or mobile home parks, are a common sight across roadside America in rural areas. They are often found in post-agrarian small towns and reflect the socio-economic conditions of the rural poor. Trailer parks provide affordable and autonomous housing for those who are shut out of the conventional real estate market, however, there are considerable social costs attached to such housing.[35] Although predominantly a rural phenomenon, trailer parks are also found in suburban areas with weak zoning.[36] This is generally not the case in major cities where zoning laws forbid these encampments. The City of Houston Code of Ordinances regulates the locations in which manufactured homes are permitted.[37] These mobile home parks are intermingled amidst formal residential and commercial areas in peripheral areas.

Mobile home parks in Houston are typically characterized by curbless streets with open drainage ditches. Sanctioned mobile home parks are more formalized and permanent, while undocumented trailer parks (Fig. 23.10) are informal and transient. Thus, the spatiality of illegal trailer parks has more in common with informal settlements in the Global South or Roma encampments in Europe. Illegal trailer parks are most often homes for undocumented immigrants, and thus, create a type of non-border 'colonia' settlement. In Texas, these informal settlements, categorized state-wide as *colonias*, are officially defined as having substandard and temporary forms of housing where residents lack basic services such as drinking water, sewage

Fig. 23.10 (undocumented) Trailer Park|Northwest Houston; *Photo* Gregory Marinic

treatment, and paved roads.[38] These communities occupy indeterminate zones along bayous, flood-prone sites, edge spaces, and powerlines, or within the backlots of gas stations and other hidden slices of space—monetized by property owners or appropriated by residents. The trailer park shown below sits on a flood-prone site alongside a bayou behind a gas station. Housing migrants and their families from Mexico and Central America, the site is very tightly packed with trailers, tents, storage sheds, septic systems, and pickup trucks.

(11)   **The (borrowed) utility easement**

An easement, otherwise known as a right-of-way, gives a utility company the authority to use or transit a piece of property without obstruction. Massive power line easements crisscross Greater Houston running alongside 12-lane wide expressways, cutting across bayous, and bifurcating loblolly pine forests. Property owners are prohibited from introducing buildings, building extensions, garages, barns, swimming pools, above-ground fuel tanks, signs, billboards, tall trees, obstructions, and mounding of soil into the right-of-way.[39] Power companies will request the removal of these encroachments and seek legal recourse should the landowner refuse to comply. Throughout Houston, informal encroachments (Fig. 23.11) often appropriate these spaces in ways that go unnoticed. Built forms, such as sheds and chicken

Fig. 23.11 (borrowed) Utility easement|Northwest Houston; *Photo* Gregory Marinic

coops, or temporal occupancies ranging from parked cars to drying laundry borrow these easements for private uses.

(12) **The (haunted) landscape**

Houston has grown through the continual aggregation of discontinuous residential, commercial, and industrial development. Speculation and lack of regulation has created patchwork suburbanization characterized by chaotic and cannibalistic land use practices. These conditions have resulted in a landscape marked by vacant sites, abandoned buildings, and underutilized parking lots that randomly perforate the metropolitan area. Terrain vagues create space for temporal attractions that take advantage of undervalued properties.

Houston is well known for its haunted houses and haunted landscapes, as well as seasonal experiences themed for Christmas and Renaissance festivals (Fig. 23.12). The underutilized landscapes that house these activities are only active seasonally in the months surrounding Halloween from September through November, or during the Christmas season from November to January. Haunted attractions are housed in warehouses or on outdoor sites in peripheral areas. At Christmas, many terrain vague

Fig. 23.12 (haunted) Landscape|Northwest Houston; *Photos* Gregory Marinic

spaces come to life again, including *The Light Park* group which operates holiday lighting installations in parking lots in suburban Spring and Katy.

Housed within and around a nondescript warehouse in North Houston, the former Screamworld on Beltway 8 was among the most popular haunted landscapes from 1989 until its final season in 2020. Every year, that site remained idle for nine months during the off-season. Other haunted landscapes in the area include haunted trails in the Klein area of North Houston, which calls itself, 'Houston's most insane outdoor haunting experience of pure terror,'[40] while on the opposite side of town in Brookside village, Phobia is a longstanding attraction. During the COVID-19 pandemic, Phobia oriented many of its attractions toward dystopian viral themes as their website illustrates: 'Compromised security at Darkelab's chemical synthesizing facility spews viral anguish. The brutal landscape of open-air infestation. Smelling the fear, lurkers riot in the streets. Terror waits beyond every shadow. We all carry the disease, but can we escape the crisis?'[41]

Reflecting

The future of an informal Houston was boldly forecasted in 1974 by an avant-garde architectural icon whose ruins stand quietly down the road from both Almeda Mall and the former Mullet in Southeast Houston. And although this forgotten building could be considered the 'thirteenth' condition, its uniqueness and singularity warrant it as a special case. The Best Products Company was a Richmond, Virginia-based catalog retailer founded by Sydney and Frances Lewis in 1958.[42] As merchants and design aficionados with a desire to draw interest to their stores, they commissioned James Wines and SiTE architects to design a series of unorthodox retail showrooms. In 1974, the Best Products Houston showroom opened near Almeda

Mall. Named the Indeterminate Façade Building, the showroom was one of nine store prototypes designed by sculpture in the environment (SiTE) for Best Products that engaged suburbia through critical architecture. Wines described the project as the de-architecturization of the façade, essentially an informalized building, achieved by crumbling its brick veneer to create the appearance of something between construction and demolition.[43]

The irony of the Indeterminate Façade Building is that its subversive and fragmented form evoked ruins or deconstruction, and thus, foretold the future of decline and disinvestment in not only the Kingspoint, but across the Houston metropolitan area. Over time, this intentionally informalized building ultimately transformed from a metaphorical ruin into an actual one. With its purposely 'ruined' and crumbling profile, the building succumbed to the cyclical rise and fall of suburbia. Yet the original design has since been altered to appear more conventional. Its subversive qualities have been subverted themselves, intentionally leveled and rebuilt (Fig. 23.13) to convey a more ordinary and finished, in fact, a more *formal* appearance. The building is no longer used as a retail store, its unique architectural qualities have been entirely stripped away. Today, this architectural landmark exists in a tentative state of semi-abandonment, surrounded by a security fence and parking lot that is intermittently filled with shipping containers. Used by a Chinese wholesale trading company, the Indeterminate Façade Building has been stripped of both its architecture and memory. While the building has been modified to convey a more conventionally 'formal' and non-descript appearance, Houston itself has become an increasingly informal city.

As a commentary on both consumption and suburbia, Wines mobilized commonplace buildings to work against conventional expectations, as well as the reigning social, psychological, and aesthetic standards of 1970s suburbia.[44] The ambiguity of their form, a subversive decay within a context of normalcy, foreshadowed the future of the Best Products store to distort its relationship with site, formality, proportion, scale, history, and nature to reveal tentativeness and instability. The architecture

Fig. 23.13 Best Products Indeterminate Façade Building, Houston in 1974 (left) and 2014 (right); Photos courtesy of Wikimedia (left) and Gregory Marinic (right)

subverted utopia to foretell a story of dystopia on the horizon—a witty and provocative narrative that challenged the increasing irrelevance and complacency in post-1968 architecture. The first of a series of buildings that James Wines would design for Best Products, the Houston showroom was perceived as a profound conceptual statement in the art world, however viewed with deep disdain by mainstream architects.

The Indeterminate Façade Building rejected architectural conventions of form, space, and structure. Rather, Wines believed that the Houston showroom was an 'architecture of information', retelling a site narrative while straddling the line between art and utility, environmental and consumption, permanence, and deconstruction.[45] Grounded as not only an architect but an artist, sculptor, and graphic designer, Wines viewed buildings as a social provocation, and thus, his design emerged from a liminal place between art and architecture. Together, the Indeterminate Façade Building, Almeda Mall, The Mullet, and their adjacencies reject hegemony in the Kingspoint neighborhood to address more informal uses, social environments, creative practices, and patterns of consumption.

The 'conditions of informality' identified in this research afford immigrant communities and others in Houston existing underutilized forms of urban 'infrastructure' that serve many needs. Ethnic shops, storefront churches, and social clubs are housed in former bastions of suburban conformity. In their transition from solidly middle class and white greater socio-economic diversity, suburban neighborhoods and their long-time residents must negotiate various polarities—chaos/order, ambivalence/adaptation, resistance/resilience—while continually adapting to and learning for a new context. The obsolete and substantially altered environments in these neighborhoods offer a window on the future of suburbia in the United States. Today, peripheral Houston is far more urban, heterogeneous, demographically diverse, and socio-economically blended. It remains a car-dependent landscape but contains socio-spatial attributes of resilient systems—resource diversity, resource availability, and institutional memory—and thus, offers the potential for even greater socio-economic layering and urbanity.

For Foucault, these marvelous dead zones at the edges of cites have never been empty.[46] His 'space of emplacement' casts a critical lens and rationale on the establishment of heterotopias within abandonment. Processes of disinvestment and fragmentation create voids in activity, creating physical space for alternative occupancies to germinate and thrive. Although shopping malls and their adjacent residential zones have been conventionally perceived as both 'secure' and homogeneous, the increasing subversion of their formality and conformity has given rise to indeterminacy of usage patterns—terrain vague. The drosscape of obsolete malls and their environs are vast spaces, and thus, their abandonment and cannibalization create unique issues for municipalities, stakeholders, and citizens, as well as for the planners and architects that participate in reshaping these places. Private, yet perceived as 'public' space by their users, dying malls and retail strips serve as peripheral placeholders for actual urbanism serving underrepresented low-income and immigrant communities. Left empty by their intended users, these incrementally deformalized infrastructures

slowly evolved into transgressive places, and later, places of opportunity and aspiration. Global and informalized, they no longer support hegemony and therefore, have been appropriated by socio-economically underrepresented communities.

Terrain vagues have always been fertile territories for marginalized communities and occupancies. Viewed through the lens of impending gentrification, Sola-Morales proposes that when architecture and urban design impose their desires onto a vacant space, violent transformations dislodge the estranged and seek to dissolve the uncontaminated and organic magic of obsolescence.[47] Formal planning and design often undermine the richness of terrain vague by imposing a tabula rasa. And yet, to a certain degree, suburban heterotopias juxtapose various seemingly incompatible functions—private investment, national retailers, mom-and-pop shops, social services, and immigrant community activities—whereby their *collection* creates a new form of homogenization.

American society has become desensitized to the post-industrial urban obsolescence which supersedes urban sites of production and consumption, however, suburban sites that have lost their original functions are generally perceived as even more subversive. These so-called dead zones create opportunities for heterotopias to emerge, offering the foundation upon which ethnic enclaves are constructed. Blending the peripheral fringe of Sola-Morales's terrain vague with Foucault's '…another real space, as perfect, meticulous, and well-arranged',[48] suburban heterotopias reveal how obsolete spaces become appropriated and transformed into self-edited illusions. Heterotopias built upon suburban obsolescence reveal inherent flaws in the late capitalist system. Castoff spaces offer opportunity, while at the same time illustrating aspects of social fragmentation and economic polarity.

Today, the suburban periphery of Houston is less shaped by the actions of developers, architects, and homeowners' associations, but rather, it is continually being adapted for the needs of laypersons, merchants, and makers. This globalized landscape is characterized by practicality, compromise, and connectivity to places far beyond the national borders of the United States. Public and semi-public spaces in suburbia represent spaces of appropriation, negotiation, and compromise. A multicultural periphery challenges conventional wisdoms and shifts our expectations of what is possible in American suburbia. Unlike most of the largest cities in North America, Houston remains affordable with nearly limitless opportunity for the adaptive reuse of its overbuilt existing retail infrastructure and housing stock. Incremental accretions reveal the subtleties of faded paradigms of the past, yet a formerly homogeneous suburban utopia has been replaced by far more complex and diverse mosaic of heterotopias. This is Houston, informal city.

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friends with many artists and architect James Wines of SiTE. They frequently acquired art through trades of Best Products goods, enabling many struggling artists to furnish their lofts with appliances and televisions and to live in relative comfort, sometimes before they were selling much work. Source: *New York Times, Roberta Smith.*

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Chapter 24
Tanks, Wells, Tacos, and Pitches

Susan Rogers

Abstract Borders define and divide. The act of delineating a border is both inclusionary and exclusionary, often resulting in starkly differentiated social, political, economic, and spatial conditions on either side of the line—an inside and an outside. This is as true in the formal cities of the north, as it is in the informal cities of the south. In Texas, the colonias along the US-Mexico border have defined informal development in the state. Yet, further from the border, hundreds of thousands of families live in "non-border colonias," an official term that defines, in part, those areas without basic water and sewer services. Aldine, located north of Houston, is one such non-border colonia. The Houston city limits flow through the community along the narrow right-of-way of a single street, expanding briefly to swallow the largest public park, and leaving the remaining community outside and excluded—in an infrastructural and regulatory black hole. The result is that uneven spatial and socio-economic conditions are reproduced, while simultaneously the borders between nations, economies, and territories are blurred. Exploring the contradictions and dualities at the intersection of the formal and the informal, and where these two conditions collide and blend, is the point of departure for this chapter. In the case of Aldine, being outside has resulted in a transitional urbanism, or a lite urbanism driven by need, opportunity, and invention that both transcends the border and embraces it.

Keywords Border · Production of space · Informal · Extraterritorial ·
Transnational urbanism

Borders define and divide. The act of delineating a border is both inclusionary and exclusionary, often resulting in starkly differentiated social, political, economic, and spatial conditions on either side of the line—an inside and an outside. This is as true in the formal cities of the north, as it is in the informal cities of the south. In Texas, the colonias along the border between the United States and Mexico have defined informal development in the state and are home to nearly a half a million

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people. While there are many different definitions of a colonia, the most common characteristic is the lack of public water and sewer systems. Yet, hundreds of miles from the international border between these two nations, and often in close proximity to the largest cities in Texas, there are nearly one million people living without these basic necessities.

In Texas, these places are defined as "non-border colonias" an official term designating a residential area "located in an unincorporated area of a county all parts of which are at least 150 miles from the international border of this state; in which water or wastewater services are inadequate to meet minimal needs of residential users as defined by board rules; in which the average household income is less than the average household income for the county in which the community is located; and that consist of 11 or more dwellings that are located in close proximity to each other in an area that may be described as a community or neighborhood." Non-border colonias are not defined by international borders, but instead on being outside the limits and infrastructural service areas of adjacent cities—extraterritorial.

Aldine, adjacent to the fourth largest city in the United States, is one such non-border colonia. The Houston city limits flow through the community along the narrow right-of-way of a single street, expanding briefly to swallow the largest public park, and leaving the remaining community outside and excluded. The outcome is an infrastructural and regulatory black hole—a splintered urbanism. In Aldine, this boundary defines and exaggerates uneven spatial and socio-economic conditions, while the surrounding transnational community simultaneously blurs the borders among nations, economies, and territories. Aldine reflects the paradoxical opportunities and constraints inherent in disparate border conditions, including the tension between formal and informal developments and the differentiated valorization assigned to space and people on either side.

Exploring the contradictions and dualities at the intersection of the formal and the informal, and where these two conditions collide and blend, is the point of departure for this research. In the case of Aldine, informality has resulted in a transitional and lite urbanism driven by need, opportunity, and invention. Vacant land is appropriated and transformed by more than a dozen soccer clubs—La Española, La Escondida, Parque Azteca, Parque Primavera, El River Park, and others. Soccer pitches draw temporal interventions such as taco trucks, quinceañera celebrations, and markets. Flea markets strung along Airline Drive draw vendors and shoppers from throughout the city. During the weekends, thousands of people converge along the street to eat, shop, and socialize bringing traffic to a crawl. Along the two other major commercial streets, small businesses transition from the trunks of parked cars to taco trucks and other mobile shops, to brick and mortar storefronts (Fig. 24.1).

An opportunistic urbanism evident across scales in Aldine is buoyed by weak regulatory systems and the lack of formal land planning. Yet, these weak systems also create infrastructural disparity. In Aldine, similar to other non-border colonias, more than half of area families are without municipal water and sewer services, and instead rely on shallow water wells and septic tanks—many of which are failing. For every ten miles of streets, there is only one mile of sidewalks and potentially hazardous industrial land uses sit adjacent to residential areas, open spaces, and schools. It

Fig. 24.1 Mercado Sabadomingo. *Photo* Paul Hester

is within this framework, both inside and outside, that the people of Aldine have developed liminal spatial, social, and economic practices that push against disparity, embrace difference, and generate opportunity.

From the Outside

Just outside the city limits of Houston non-border colonias dot the landscape (Fig. 24.2). These settlements defy the historic and aggressive annexation policies that have exponentially expanded the size of the city over decades, while also revealing the uneven politics of pro-growth development, including the politics of who and what is in or out, as well as the socio-economic biases embedded in decision-making.

Established in 1836 on the banks of Buffalo Bayou, Houston was settled by carpetbaggers on swampland. In 1900, nearly seven decades after its founding, the city was a mere nine square miles in area with just over 40,000 people. Over the next fifty years, there was a continuous expansion of the city limits with a doubling of land area in the 1940s. In 1956, the largest single annexation occurred, swallowing up over 100 additional square miles and swelling the city to 350 square miles in area. By the 1970s, an additional 200 square miles had been added, bloating the city to over 550 square miles. In 1999, Texas law governing annexation was revised, partly as a result of the contentious annexation of suburban Kingwood, which made general purpose annexations more difficult. Since this time the City of Houston has
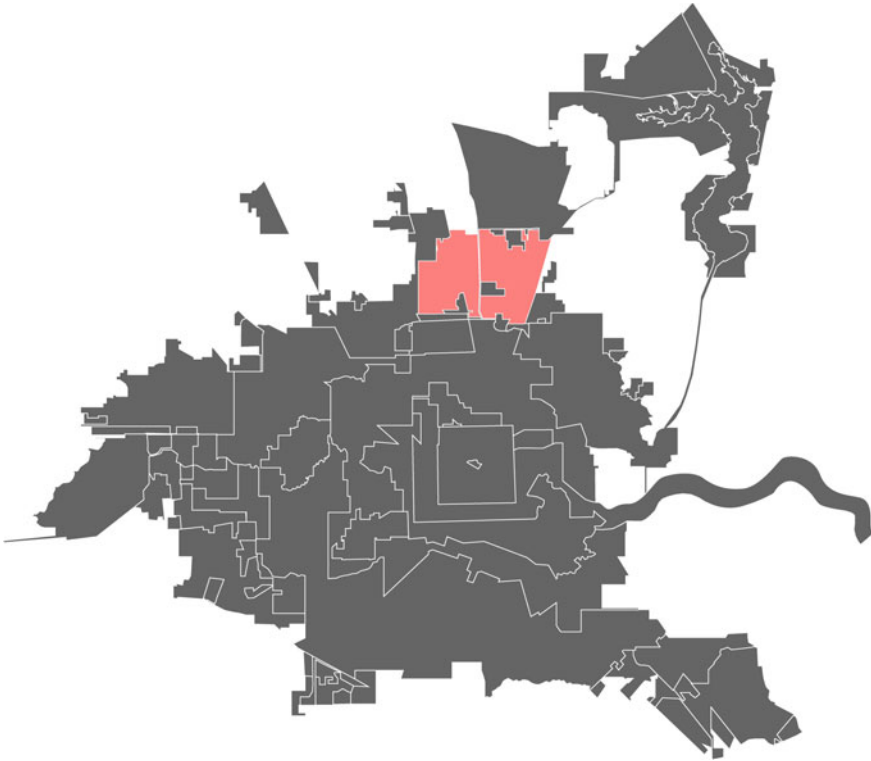
Fig. 24.2 Houston annexation over time (Aldine Red). Map by José Mario López

only completed limited purpose annexations. Even with these limited annexations, today the city covers an area of 640 square miles, more than twice the land area of New York City.

Yet, the aggressive annexation policies of Houston over the decades do not tell the full story. The geographies that were historically excluded and those currently outside the border are geographies of poverty and without the most basic of services. Some communities, like Aldine, have been leapfrogged over and over. In other cases, communities were annexed but the promised city services were very slow to arrive. Bordersville, for example, just northeast of Aldine was annexed into Houston in 1965. A decade later, water for bathing, cooking, and drinking did not flow from sink faucets for the 500 families who lived there, but instead was "delivered twice a week by Houston Fire Department trucks and stored in barrels outside of homes." Riceville was annexed to the city in the late 1960s. As late as 1982, the community had no city services, no public water facilities, and no sanitary sewers. Finally, Tamina, a settlement established by freed slaves in 1871, has been fighting for basic services for decades. The community is adjacent to the wealthy residential suburb of The Woodlands, but it might as well be miles apart. Aldine, too, is one of these places.

Looking Inside

Located at an approximate and conceptual midpoint between the formal cities of the Global North and the informal cities of the Global South lies Aldine. This unplanned, unregulated, and essentially rural community is a fluid and dynamic place. It is home to just over 70,000 people sprawling across 24 square miles. Here, the vitality that has emerged is grounded in the hopes of people who call Aldine home. Its extraterritorial location provides cover for the transnational community that reflects—in its people, places, and possibilities—both sides of the international border between the US and Mexico. Aldine is one of many communities in the Houston region that draw new immigrants. In 2018, one of every four Harris County residents were born outside the US, totaling more than a million people. In the same year, nearly four in every ten Aldine residents were born outside the United States. Immigrants to the Houston area are less likely to be US citizens than nationally, and those from Mexico and Central America are least likely to have applied for and received citizenship. In Aldine, these groups comprise 96% of all immigrants living in the community. The exertion of rights—to opportunity, to the production of space, and citizenship, in whatever form that might take—is evident in the built environment and pushes against the extractive qualities of capitalism, devalued labor, and global investment.

Yet, it is imperfect. One of every three families in Aldine survives on incomes below the poverty level. More than half of residents do not hold a high school diploma and two of every three residents struggle with English proficiency. Political power, a factor of wealth and voice, is limited; less than half of those registered to vote regularly turn out for elections. New challenges have also emerged.

At the time of this writing, the Covid-19 pandemic has had devastating economic and health impacts on families in Aldine, as it has on Black and Brown communities across the Houston region. Four of every ten workers in Aldine are employed in construction or manufacturing—industries considered essential. Another one-quarter of workers are employed in retail and food services—industries that have experienced the greatest number of layoffs. Testing and vaccination sites are limited in the community and existing intersections of privilege magnify inequity. Those who do not live near testing or vaccination sites are less likely to have internet access to negotiate information that changes daily if not hourly, or health insurance coverage. In Aldine, nearly half of all households do not have Internet services or a computer and more than one-third have no health insurance. In Texas, people who identify as Latino are 40% of the population but have suffered 43% of all Covid-19 cases and 47% of all deaths.

Exploring a "topological" approach to identify informal development in Aldine departs from and lands on a grounded analysis of spatial agency at community, block, lot, and building scales. By exploring each of these scales independently, characteristics can be isolated and values attached to differential development can be interrogated. The Aldine landscape reads like a quilt sewn together from disparate parts—at times fragmented and discontinuous. At the community scale, a patchwork of watersheds, utility districts, management districts, small and large subdivisions,

and streets loosely organize space. Within this framework are concentrations of used car dealers and flea markets strung along streets. At the block scale, the neighborhood is characterized by trailer parks, soccer fields, and homes that often sit side-by-side in uneasy and tenuous relationships with potentially hazardous industrial land uses. At the lot scale, property owners piece together adjacent sites to accommodate the homes of extended family, commercial enterprises, or workplaces. Finally, at the scale of the building, the hand of skilled tradesmen and craftsmen is evident in the informal home additions, sheds, pavilions, and storefronts. Aldine is a landscape of agility and flexibility, of making do—unconstrained by zoning or other regulations. The limits of global and local forces, and the inequities that reproduce disparity by race and class, are lessened through acts of spatial appropriation and agency.

Fractured Infrastructure: Tanks and Wells

Like most informal settlements across the globe, Aldine lacks many basic municipal services including water and sewer. Infrastructure, like so many other basic public services, is becoming increasingly privatized and fractured. Graham and Marvin note that "neoliberal critiques of the "inefficiencies" of centralized public control and ownership have fueled a widespread wave of infrastructural liberalization and privatization." In the US, the result has been an increasingly uneven distribution of what should be collective and public infrastructure systems, privatization and disinvestment in these same systems, and the resulting failures, which at times prove deadly. The monetization of other infrastructure and network services, like the Internet, furthers the divide.

In a global pandemic, flood, heatwave, or deep freeze, the privatization of public services—water, sewer, electricity—creates costs that are typically borne by those with the least ability to pay. In 2021, the Texas power grid, run by the Electric Reliability Council of Texas, a quasi-governmental non-profit, failed millions of people in the state. More than 1.5 million households in the Houston region were without power for several days in freezing temperatures, their electricity turned off to prevent failure of the entire electric grid. Pipes froze and burst; water flooded homes. Water treatment plants went offline leaving millions across the state without safe drinking water for more than a week. In one of the largest cities in the US, there is increasing investment in generators among those who have the resources, allowing them to keep power on no matter the circumstances. The potential hazards and risks to people are real—some appear during natural disasters amplified by climate change, while others are daily challenges.

In Aldine, contaminated drinking water is a daily risk. A patchwork of nearly a dozen aging municipal utility districts provides half of Aldine households with water and sewer services, while the remaining half rely on shallow private wells and septic tanks (Fig. 24.3). It is estimated that there are over 4500 individual septic systems. Of these, three in ten are subject to failure and more than half are on lots too small to work properly. The risk of contamination is compounded by the tendency of the
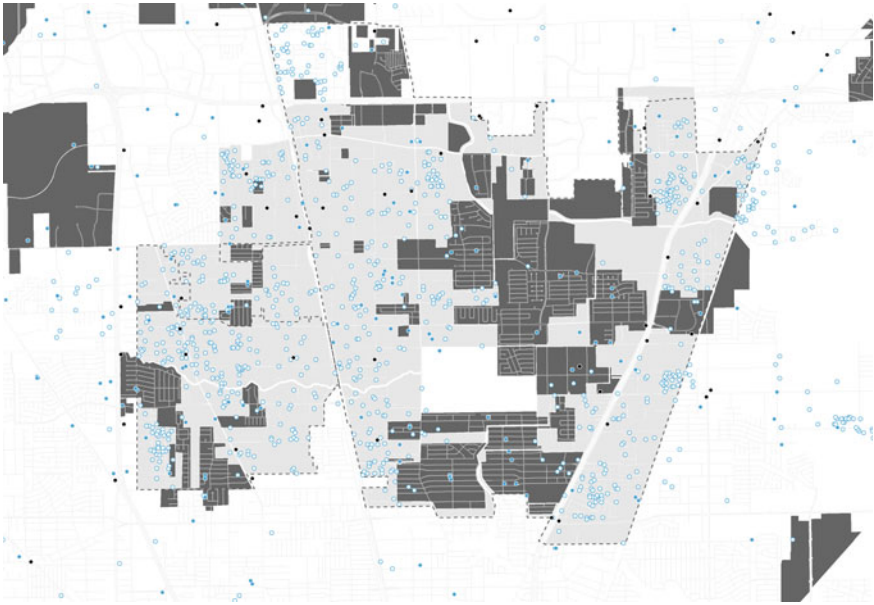
Fig. 24.3 Domestic water wells and municipal utility districts. Map by José Mario López

Houston region to flood. In 2017, Hurricane Harvey unleashed the largest amount of rainfall ever recorded in the continental United States. The storm is estimated to have flooded more than 150,000 homes in the Houston area. Yet, Harvey was simply the worst flood in a series of rain events that have left hundreds of thousands of families with soggy drywall, mold, flooded cars, trauma, and loss.

The people of Aldine did not escape the disaster of Hurricane Harvey nor the numerous other flood events across the decades. The Halls and Greens Bayou watersheds meet in the center of the community along Aldine Mail Route Road. Flood mitigation investments along Halls and Greens Bayou have been very minimal over the decades. As a result, flooding has been a persistent hazard. The risks and realities of flooding in Aldine compound the threat of contamination to area water wells, drinking water, and soils (Fig. 24.4). Even within the formal boundaries of Houston, waterways have been regularly contaminated through inadequate wastewater management systems. The city has one of the largest sewer systems in the country which includes over 6000 miles of sewer pipe. Sewage overflow has been common during flood events. The impact is that the City of Houston recently reached a settlement with the EPA on a Clean Water Act Violation which could cost up to $2 billion to address.

The informal environment of Aldine, like the formal City of Houston, has developed incrementally without guiding regulations, a master plan, or vision. Infrastructure—where it exists—is privately funded through municipal utility districts and paid for by those who use the services. The result is piecemeal development loosely connected with discontinuous and fractured infrastructure systems. Streets, drainage,
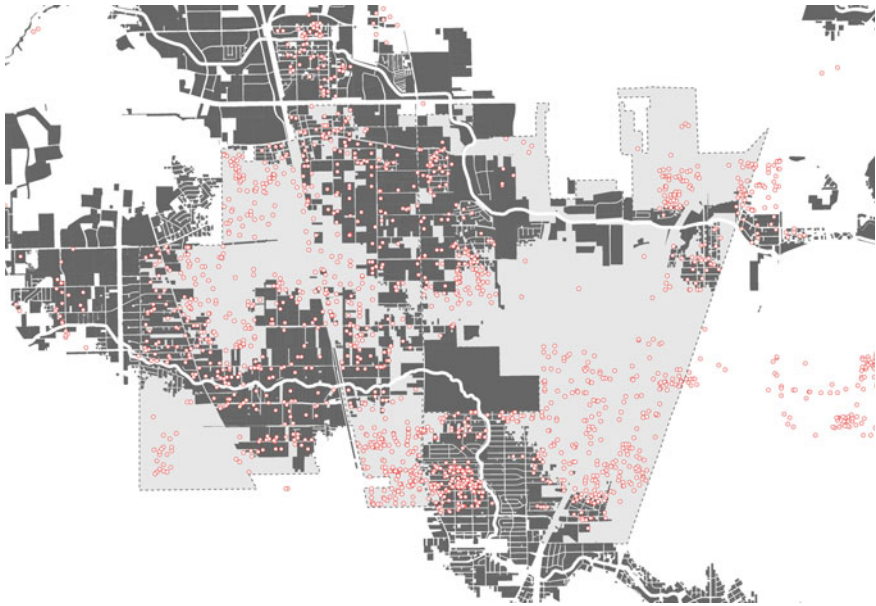
Fig. 24.4 Hurricane Harvey flooded parcels and septic tanks. Map by José Mario López

and utilities are built out plot-by-plot, creating a tangled web of disconnected and isolated systems. In other words, infrastructure in Aldine is not proactively planned, but constructed as individual properties are platted and developed. The result is a patchwork of streets, drainage systems, and other utilities that abruptly terminate at the limits of a development or property line. In this way, Aldine and Houston have much in common.

Privatized Publics: Pitches and Markets

In the Houston region, as across the globe, the exurban territory or urban fringe is where informal development is most likely to occur. The pressures of growth and land costs push development to the periphery. The result can be formal, as in the development of new suburbs. In other cases, it is simply plot-by-plot development in extraterritorial jurisdictions like Aldine. The primary difference is the coinciding production of civic infrastructure and public amenities that accommodate growth in formal developments—this includes healthcare, libraries, community centers, schools, parks, transit, and other civic spaces—and the lack of these resources in other areas. Clearly, this difference is also a product of the ability to pay, resulting in racial and economic disparities across regions and territories. Civic infrastructure is critical to public health, safety, and resilience, while also fostering the growth of

civil society and political power. Aldine, with a land area half the size of San Francisco, has two public libraries and the same number of community centers; there are no hospitals and only one county-run health center. Public transit services are limited and parks are minimal. Yet, at the scale of blocks and lots, creative spatial appropriations provide both civic infrastructure and economic opportunity.

The lack of public investment in civic infrastructure in Aldine—a lack that is driven by the discrimination, politics, and economics embedded in late capitalism— is offset by local investment in private systems. Alsayyad and Roy note that "While informality was once primarily located on public land and practiced in public space, it is today a crucial mechanism in wholly privatized and marketized urban formations." The dozen private soccer "parks" are more elaborate than most of the region's public parks and occupy half of the total land area. The investment in private soccer pitches and parks is driven by a severe shortage of public fields in the Houston region, but also by economic opportunity.

One of these, Maya Park, is home to the "Maya Lagoon," a pool with a replica Mayan Temple, shaded picnic areas, and four soccer fields with powerful lights for evening play (Fig. 24.5). While the soccer clubs charge a fee for entry, they still serve as part of the civic infrastructure. Maya Park accommodates quinceañera celebrations, taco trucks, and other events such as traditional dance festivals. The privatization of civic infrastructure and services in places like Aldine mirrors the same processes in luxury developments across the globe; both are capitalist modes of production with the only difference being the scale of investment.

The flea markets strung along Airline Drive are also part of the civic infrastructure, but more importantly, they create economic opportunity for entrepreneurs (Fig. 24.6). The markets provide a place to establish economic stability and start a business—no matter how small. The half dozen markets—Mercado Sabadomingo, Sunny, Sinta, De Buey y Vaca, Tia Pancha, and Mi Pueblo—are complemented by the Chinese

Fig. 24.5 Private soccer parks with Maya Park. *Map* José Mario López. *Aerial* Google Earth

Fig. 24.6 Airline Drive Flea Market. *Photo* Paul Hester

cultural landscape and gardens at Lucky Land. The markets enclose nearly a half a million square feet, half of all commercial space in the western part of Aldine. Every opportunity to sell and succeed is capitalized on—every space occupied. Sellers, vendors, shopkeepers, and chefs range from the established to the promising—occupying large-, small-, and medium-sized spaces across the market landscape. The markets are not simply a place to shop, but a destination for tens of thousands of families—the young and the old—to spend the weekend. A carnival atmosphere is alive with dancing, rides, food, entertainment, and giant dinosaurs. On Saturdays, the density of activity and bustle of people betray the larger community's rural character and low-density. The markets, in many ways, are another aspect of the informal cash economy and immigrant entrepreneurship. Four in ten foreign-born residents in the Houston region are self-employed, and the same group own over 130,000 small businesses. These small businesses are the primary drivers of the economy, generating one-quarter of the area's GDP.

While the flea markets create a density inconsistent with the rural quality of the place, one-third of area land is vacant across the remaining patchwork of Aldine. Vacant land, or terrain vague, as a problem is the topic of many prescriptions and cures. Most solutions fit within the accepted "good" urbanism paradigms—formal urbanism—filling the holes with pedestrian-friendly, dense, mixed-use environments. But the people of Aldine have created a more agile, temporary, and engaging solution—it is a "lite" urbanism. This lite urbanism is fueled and fired by the lack of zoning and strict building regulations. Development is opportunistic—space is appropriated, particularly where no one is looking—for vending, car detailing, taco

trucks, or other uses. Like the flea markets lining Airline Drive, appropriations are useful and entrepreneurial.

A gradient of commercial spaces line two other major streets—Aldine Mail Route Road and Aldine Westfield. The gradient moves from the temporary and mobile businesses to brick and mortar stores. Nearly all area businesses are small and locally owned—there are no Starbucks, or Chili's, or major grocery chains, and the only two major banks sit at the very edge of the neighborhood. Yet, the transnational needs of the community are revealed in the dozen Western Union sites—amidst the many other international money transfer locations.

There is also a more problematic part of the Aldine story—one that is centered on the environmental injustices embedded in the location of hazardous land uses. The prevalence of toxic industries is a problem across Harris County. In fact, Harris County is ranked as #1 by the EPA of over 2000 ranked counties in terms of releases. Aldine is littered with used car lots, pick-a-part lots, industrial plants, and metal recycling. The northwest section of the community is the most problematic. Here, residential and industrial land uses create a checkerboard pattern. A concrete batch facility sits directly across the street from soccer fields, while a local school shares a property line with industrial uses. In total, there are 37 toxic release inventory sites, as defined by the EPA, within five miles of the center of the neighborhood.

Constructed Difference

Aldine is layered and imperfect—but also organic and authentic. A more hidden informality is in the construction of buildings, properties, and land uses. In Aldine, architecture is in a constant state of evolution, growing, and changing, as the needs of a family or business change. Its evolution is broadened by the acquisition of neighboring lots to expand land area. This characteristic only emerged when the community became a primary destination for immigrants from Mexico and Central America who brought their ideas about space, their skills in construction, cultural preferences, entrepreneurial spirit, and a do-it-yourself spirit. Writing in the *Texas Observer* in 2005, Jack Bernstein states: "Modest but gracious private homes on spacious lots devolved into a grimy urban landscape dominated by car salvage yards, auto detailing shops, and low-rent flea markets. Modern building codes and zoning standards are mocked by hundreds of recent-vintage homemade houses and add-ons that look like they were built on Saturdays when the inspectors were at home sleeping." This culturally biased and derisive reporting fails to recognize the creativity embedded in the construction and modification of buildings throughout the neighborhood—both residential and commercial. Along major commercial streets, taco trucks grow extensions—some elaborate and others more modest—to provide shade, seating, lighting, and air conditioning. Homes are expanded and transformed to accommodate businesses, extended family members, or communal gathering spaces (Fig. 24.7).

The inventive, self-built buildings reflect the human needs, daily routines, and conventional desires of the people who own them. They also reflect that more than

Fig. 24.7 Commercial business adaptations. *Graphics* Cynthia Cruz

Fig. 24.8 Mixed-Use House. *Photo* José Mario López

a quarter of current residents work in construction, bringing their skills, craft, and trades to their own built environments (Fig. 24.8). In 2008, the owner of La Escondido Soccer Club, Felipe Cruz, was interviewed by the *Houston Chronicle*. Mr. Cruz, who had come to the US from Mexico, was a home builder by trade and reported that he was continuously remodeling the facilities at La Escondido, including improvements to the clubhouse. Amid many adverse conditions, the people of Aldine exhibit the virtues of resilience, innovation, and adaptation.

Conclusion

Informal and formal developments occur simultaneously, and in degrees, across the globe. Both forms of development are interdependent and related; the distinction between them is often blurred and muddy. As Harris argues, informal development "is peculiarly urban in character and geographically ubiquitous." The conditions that define informal development—the appropriation of land, the legality or irregularity of self-built dwellings and buildings, and the lack of infrastructure and other basic

public services—have always existed beyond the territories delineated simply by national borders, city limits, or latitude. Instead, informality is increasingly a product of opposing forces–one of public disinvestment and privatization, and the other of collective will. It is a negotiation between the state and society that plays out in places where the state is weak, but the society shares spatial, economic, and social agency.

The larger issue is whether the disparities in access to infrastructure, public services, and protective regulations that characterize informal development will be, or perhaps more appropriately are now being reproduced in even more intricate but larger patterns that cross boundaries, districts, and communities following lines of wealth and poverty across a region. As more and more funding mechanisms are privatized or at a minimum "zoned"—through tax increment financing—there is a significant risk to the wide range of public goods and services that should be available to all. Clearly, in many places like the Houston region, this is already the case.

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Chapter 25
Understanding Informal Housing in the Mississippi Delta: Lessons from Latin American Informal Settlements

Silvina Lopez Barrera

Abstract Housing informality in the United States has received relatively limited attention, except for the southern border Colonias. Recent literature shows a growing number of informal housing practices in the U.S., highlighting its distinctive characteristics that in some cases result from informal subdivision of land, housing non-compliant building codes, lack of building code reinforcement, or hybridized forms of informal housing with formal land ownership. This essay aims to explore and challenge the ways in which informal housing is studied in the U.S. Exploring case studies of informal housing in rural America, specifically in the Mississippi Delta, this essay challenges common assumptions among academics and practitioners that informal housing practices are issues that only affect metropolitan cities in the Global South. As a result of socio-economic inequalities, barriers to affordable housing, and a lack of enforcement of building codes and zoning regulations, informal housing practices using manufactured mobile homes and accessory dwelling structures in the form of "sheds" spaces are examples of affordable housing solutions in the Mississippi Delta. The study of informal dwelling structures in the Mississippi Delta unveils the complexities and multidimensional aspects of housing informality present in many American cities and rural towns, and how informal structures are utilized to accommodate habitable spaces and small business enterprises. Finally, drawing on successful and failed experiences of architectural interventions on informal housing in Latin America, this essay aims to contribute to the current international debate on informal housing.

Keywords Informality · Rural · Mississippi Delta · Housing · Typology

Definitions of what constitutes informal housing vary, and they depend on context at both the local and global scales. The qualities of informality have been widely studied and defined at the urban and city scales. Recent literature highlights the ubiquity of informality and its multiple variations and nuances depending on the context.[1] However, housing informality in the United States has received relatively limited

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attention except for the southern border Informal Homestead Subdivisions (IFHS) or Colonias,[2] and the informal practices in the West Coast, including Additional Dwelling Units (ADUs), garage conversions, back house units, and backyard units.[3] Scholars highlight the presence and characteristics of informality in the Global North with special emphasis on urban informality, which shows a growing number of informal housing practices in the US, emphasizing its distinctive characteristics that in some cases is the result of informal subdivision of land, housing non-compliant building codes, lack of building code enforcement, or hybridized forms of informal housing with formal land ownership.[4]

This chapter argues that some of these urban characteristics of informality can be extrapolated and studied in the context of small towns and rural communities in the United States, including their specific local, physical manifestations and their variations. Based on the characteristics of informality, this essay illustrates how these are physically manifested in the transformations of housing typologies to solve practical dwelling and spatial needs, such as sleeping and working. One of the most common types of informality is what Harris refers to as "Diffuse" informality, where informal practices and building transformations at the domestic scale are largely widespread and invisible.[5] These practices are often non-compliant or ignore code and zoning regulations. Sometimes these practices tend to be intentionally invisible and temporary to provide affordable solutions for the pressing needs of its occupants.

In most cases, informal practices are a deliberate self-built or self-help attempt to solve residents' dwelling needs. They respond to the demands of growing households or changing families, rental or homeownership financial burden, and the sharing of multifamily housing units. The ways these informal practices are materialized can vary. They depend not only on the users' needs but also on available local resources and local constraints, such as zoning regulations. Another characteristic of informal housing practices in rural America is defined, in Harris' words, as "*Embedded.*"[6] This occurs when invisible, informal, and individual housing transformations become the established pattern in the morphology of a neighborhood or a community, and are therefore accepted and legitimized by the community. This type of consolidation is frequently the result of poorly enforced regulations. The consolidation of patterns of informality can be more visible in small rural towns that lack zoning regulations in the first place, and also lack building code enforcing authorities, such as building code officials and qualified contractors.

The different characteristics of informal housing in the US are intrinsically connected to their local contexts. They are typically mixed with formal housing, blurring the boundaries between the formal/informal urban fabric and housing practices, which challenges the concept of what constitutes informal housing.[7] Non-compliance with building code has multiple implications for the presence and existence of informal housing. Often, lack of resources and appropriate building maintenance practices result in non-compliance with building codes, affecting the safety and wellness of the inhabitants. This essay aims to provide insight into the production of informal housing in rural and disenfranchised communities in the United States, specifically the Mississippi Delta, and reveal how informal dwellings are integrated

within existing housing typologies to solve housing needs. These dwellings have spatial patterns that reflect these needs, and are their physical manifestation.

This study of informal housing practices in the Delta unfolds in three different stages that incorporate analysis at different scales from the regional, to the local, and, most importantly, the building scale. The first stage of the analysis of informal housing involved different small towns in the Delta. These towns represented a variety of sizes in terms of population and connectivity, as relates to their proximity to highways. The analysis included some towns that are connected or relatively close to important highways and towns located in more remote areas. The second stage of analysis included interpretation of satellite imagery from Google Earth and cross-referenced information from satellite imagery with fieldwork. This spatial interpretation allowed us to identify footprint characteristics and housing unit arrangements in context.[8] Finally, at the building scale, we used fieldwork observations and the study of housing typologies as an analytical tool to identify existing precarious housing conditions and the spontaneous self-help transformations that accommodate dwelling and livelihood needs.

Housing Challenges in the Mississippi Delta

A rural landscape, including small towns and few large cities, characterizes the state of Mississippi. The state struggles with persistently high poverty rates, low access to healthcare, and food insecurity, among other indicators; 20.8% of the state's entire population is below the federal poverty line, and the poverty rate is 7.1 % higher than the national average (13.7%).[9] The area known as "the Delta" is located at the lower part of the Mississippi River. The Delta region is defined as the floodplain area between the Mississippi River and Yazoo River. This region has unique environmental and geological characteristics, including clay soils that are prone to flooding (Fig. 25.1).[10]

Demographics in the area reveal that the population is predominantly black and is shrinking in most counties (Fig. 25.2). The towns in the Delta and their vast landscape have been shaped by their unique racial, cultural, and economic history. Despite the advancements in racial equality and social and political empowerment, African Americans in the Mississippi Delta struggle with persistent poverty and economic disinvestment in their small towns.[11] In this context, the emergence of informal housing in the small towns in the Delta is entangled with issues of structural racism, segregation, poverty, and economic disinvestment. Declining small rural towns, boarded-up vacant downtown buildings, and blight residential and commercial buildings are images of the complex and unjust geographies in rural Mississippi.[12]

Although there is population shrinkage in the region, there is also a shortage of affordable housing.[13] Furthermore, low-income households experience barriers to adequate and affordable housing. Low-income renter households that experience rental cost burden are those who often experience inadequate and poor housing quality. According to the US Department of Housing and Urban Development,
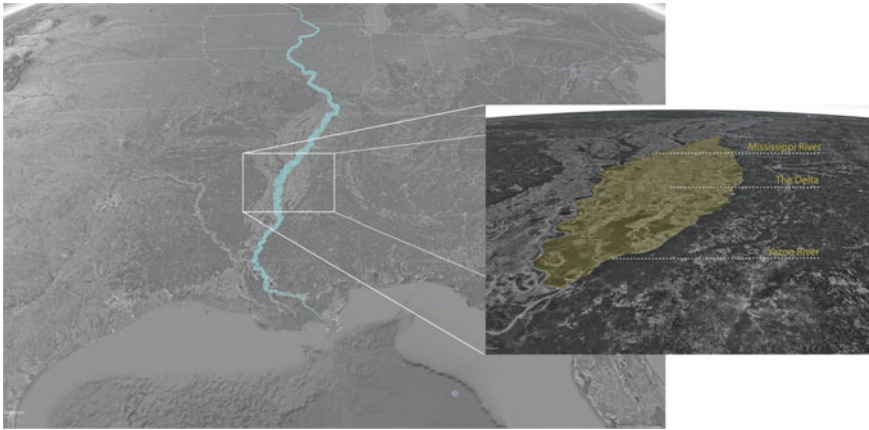
Fig. 25.1 Mississippi Delta. *Map* Silvina Lopez Barrera using Google Earth

DEMOGRAPHICS

County name	Pop. 2010	Pop. 2019	Change 2010-19
Mississippi	2,968,130	2,976,149	0.3%
Bolivar County	34,153	30,628	-10.3%
Carroll County	10,597	9,947	-6.1%
Coahoma County	26,145	22,124	-15.4%
DeSoto County	161,267	184,945	14.7%
Grenada County	21,898	20,758	-5.2%
Holmes County	19,483	17,010	-12.7%
Humphreys County	9,373	8,064	-14.0%
Issaquena County	1,399	1,327	-5.1%
Leflore County	32,382	28,183	-13.0%
Panola County	34,698	34,192	-1.5%
Quitman County	8,222	6,792	-17.4%
Sharkey County	4,916	4,321	-12.1%
Sunflower County	29,383	25,110	-14.5%
Tallahatchie County	15,385	13,809	-10.2%
Tate County	28,872	28,321	-1.9%
Tunica County	10,778	9,632	-10.6%
Warren County	48,770	45,381	-6.9%
Washington County	51,135	43,909	-14.1%
Yazoo County	28,065	29,690	5.8%

Fig. 25.2 Demographics by County. Date source U.S. Census Bureau, 1990, 2000, and 2010 Censuses of Population (corrected), and 2019 County Total Population Estimates. Map and Table by: Silvina Lopez Barrera

"*Affordable housing is generally defined as housing on which the occupant is paying no more than 30% of gross income for housing costs, including utilities.*"[14] Like in the rest of the United States, the 30% rule that defines housing affordability represents a housing rental cost burden for low-income households because the remaining 70% of the household income is usually not enough to cover for their living expenses, including food, healthcare, education, transportation, and utilities,

among other everyday expenditures.[15] Studies on housing affordability in the United States show that low-income households that dwell in low-quality housing conditions tend to pay more than 50% of their income in housing.[16]

In the Mississippi Delta region, barriers to financial resources are interconnected with persistent poverty and a shortage of affordable housing developments, contributing to the emergence of informal housing practices. Additionally, these barriers and challenges are augmented by the lack of enforcement of the building code and regulations at the local level, resulting in a deteriorating housing stock with unsafe and unhealthy conditions that have become expensive to restore and maintain for landlords.[17] Paradoxically, this precarious housing stock becomes the primary rental supply for low-income residents who need access to affordable housing. The complex social, economic, and political root causes of informal housing practices are intertwined with the historically marginalized black communities in the Delta, normalizing the "invisibility" of housing precarity in public debate. Conversely, the lack of enforcement of the building code and zoning regulations allows communities to adapt and transform their housing structures to their needs, household changes, dynamic dwelling arrangements, and changes in their livelihoods. This flexibility enables residents to add small dwelling structures to their homes and sometimes small spaces intended for working purposes, such as small business enterprises or workshop areas that support their occupations.

As previously stated, scholars have focused on informal housing practices in the global south. Still, there is evidence of a growing number of informal practices in the United States that are often concealed as suburban developments. In the Delta, these informal housing practices are not visually hidden: they are part of the morphology of the towns. Like in other parts of the US, informal housing practices are embedded within the formal fabric of the towns with access to basic infrastructure such as potable water, electricity, and sewage. However, in low-income households, informal practices are sometimes a result of disrepair. Studies show that low-income minority homeowners in the US often face challenges in maintaining their homes, resulting in deferred housing maintenance, causing poor housing quality and substandard conditions.[18]

Housing Typologies: Precarity and Informal Practices

Although there is a wide range of housing conditions in the Delta, from well-maintained building structures to blight vacant properties, affordable housing stock exhibits substandard conditions for low-income households. The combination of unmaintained housing, vacant blight properties, and lack of enforcement of the building code produces the conditions for informal housing practices to emerge. In this context, a deeper study of existing housing typologies and informal practices reveals their physical manifestation and the challenges they face.

Through fieldwork observations, the most common housing typologies were identified, focusing on those that exhibited patterns of structural issues or maintenance

challenges and also included some form of informal housing practice. Some of the common challenges with substandard housing units are the result of a lack of maintenance along with constructions and repairs that do not follow building code standards.[19] These building problems are translated into poor insulation and a lack of appropriate maintenance of building systems such as sewage, water supply, and electrical systems.

Additionally, in the Delta, foundation settling is a common housing condition. Foundation settling is a building pathology that occurs over time due to changes in soil condition and the environment. Differential settlements on foundations are caused by a combination of environmental and climate conditions. The soil composition, predominantly clay and expansive clay, combined with a humid climate with heavy rainfalls and low-lying land topography intensifies the predisposition for differential settlement in foundations that can affect entire structures. Differential settlements on foundations cause cracks on walls, roofs, and floors, compromising structural integrity and the integrity of the building envelope, insulation, and conditioning systems. These issues can create serious challenges for homeowners as they attempt to stabilize their housing structures as well as maintain them due to the fluctuations of foundation settlement over time.

Existing housing typologies observed included middle-income and low-income home owned units, rental housing units, public or subsidized housing. The most common single housing typologies included the ranch-style home, the cottage or bungalow-style home, and the traditional southern shotgun-style home (Fig. 25.3). Specific building pathologies and problems were observed in all of these different typologies, encouraging some informal practices that addressed these problems.

The brick veneer ranch houses can be typically found in middle-income and low-income residential areas and subsidized public housing. These one-story ranch houses are built on a slab foundation. They usually have a rectangular floor plan that

Fig. 25.3 Housing Typologies: ranch, cottage, bungalow, and shotgun. *Photographs and drawings* Silvina Lopez Barrera

is oriented along the direction of the street. The interior of the ranch house typically includes two or three bedrooms and one bathroom and it usually has a carport on one of the short ends of the rectangular floor plan. Although the building envelope of these homes is relatively easy to maintain because of the use of brick veneer, one of the challenges with this type of housing is foundation settling.

The second group of housing typology observed was the cottage or bungalow-style home. This typology can have one or two stories and contain a crawl space in the foundation. Some of the most typical challenges of homes with crawl spaces involve issues with moisture, mold, and pests. These building pathologies are aggravated by a lack of maintenance and by the warm and humid environmental conditions.

The Southern shotgun-style house was the third typology observed. These housing units have a long and narrow floor plan with a linear arrangement of rooms, including one or two bedrooms and doors at each of the short ends of the houses. Usually, shotgun houses contain crawl spaces, have a front porch, and are built in rows of several houses with narrow front porches facing the streets. Unmaintained structures of this housing typology experience issues in their crawl spaces and in their foundations.

Informal housing practices are mixed and hybridized with all these single-family housing typologies. Some of the most typical informal housing practices are manufactured mobile homes that are embedded within the formal fabric of the town, and additional dwelling spaces in the form of shed structures that are connected or adjacent to existing housing units (Fig. 25.4). Manufactured mobile homes usually have a living room and kitchen at one end and bedrooms at the opposite end of their long rectangular floor plan. Although mobile homes in the United States are typically clustered together, in the Delta, they are mixed with the town fabric. These informal practices can be understood as affordable housing solutions for low-income and middle-income households.

The additional dwelling space is typically an independent shed structure that works as an extension of the house, accommodating habitable spaces or small businesses enterprises. The presence of these types of structures in residential areas indicates that

Fig. 25.4 Housing Typologies: manufactured mobile homes and additional dwelling structures (sheds). *Photographs and drawings* Silvina Lopez Barrera

the household needs to increase its indoor living space to accommodate household dynamics.[20]

Unmaintained and substandard housing is usually the only available and affordable rental housing for low-income residents. Additionally, substandard housing and despaired housing acting as the main supply for affordable housing negatively influences the property market value, reinforcing disinvestment in residential areas and entire towns. In the context of small town disinvestment, the small informal interventions of shed structures embody critical responses from local residents as they address their affordable housing needs.

Lessons from Latin America: Incremental and Assisted Self-help Housing

As has been articulated in this essay, informal housing in the United States can take many forms and have different physical characteristics that can be locally rooted and at the same time have regional and global implications. Although the physical manifestations of informal housing in the US are different from the ones in Latin America, there are some attributes in common. Comparing these characteristics and the experiences of architectural and planning interventions on informal housing in Latin America allows us to challenge broad assumptions that reinforce the global north/global south dichotomy and contribute to the current international debate on informal housing.

While there are significant differences in material practices and the level of precarity and density (in the urban, peri-urban, and rural contexts), self-help improvements in both the US and Latin America attempt to solve basic housing needs, responding to evolving household changes and livelihood dynamics, often in the context of limited resources. Urban informality scholars advocate that it is key for urban planners, urban designers, architects, and policymakers to understand the praxis of informality in order to alleviate housing inequality and ensure vulnerable communities have access to housing.[21]

There is a wide range of examples of architectural and planning interventions in informal settlements in Latin America, from in situ upgrading of informal settlements and regularization, to displacement and evictions. The scale of these interventions ranges from mass experimental social housing interventions to small-scale neighborhood upgrading.[22] Throughout history, the planning and design attitudes toward informal housing and settlements have evolved from top-down approaches to bottom-up ones that involve community participation and shared governance. Additionally, because of a general understanding of the benefits of in situ upgrading and a gradual shift toward incremental housing, there is an increasing emphasis on participatory approaches. Thus, participatory-based design and assisted self-help housing are strategies used to meet residents' needs and accommodate different household structure dynamics.[23] However, it is important to critically understand

these approaches and consider their shortfalls as well as their potential to be applied in different contexts.[24]

When looking at the context of informal housing in the US, it becomes clear that there is a need for state and local governments, housing agencies and organizations, and developers to acknowledge the existence of informal housing practices. This recognition will enable policies to adapt and incorporate existing informality to facilitate incremental self-help housing, accessory dwelling units, housing apartment internal subdivisions, and other forms of informal housing, while upholding the safety, health, and wellness of the residents. Upgrading informal building structures will not only improve the quality of life of their inhabitants, but it will also reduce maintenance and energy costs in the long term, as well as increasing building structures' ability to resist and adapt to severe weather events and the challenges associated with climate change. Some of these upgrading strategies could incorporate retrofitting and weatherization of building structures, including the use of cross-ventilation, using reflective film in windows, the implementation of overhang shading structures to avoid heat gain, the use of weatherstripping, and sealing joints among other strategies to improve insulation and overall environmental building performance.[25]

Conclusion

From a broad perspective, housing is multidimensional and intersected by many aspects of society. It is key to understand that housing deficiencies directly affect human health, and blight properties also influence the property values of the surrounding areas, impacting the investment or lack of investment in towns. Consequently, it is critically important to capitalize on the community assets, history, and culture of the Delta to create innovative opportunities to improve the overall wellness and lives of its residents. This could include developing innovative financial solutions to facilitate incremental self-help and self-improvement housing practices, ensuring access to affordable and good quality housing. Although there have been some experiments with self-help housing in the US, most of the early self-help projects were not able to become wide-spread practices that could develop and replicate over time because of challenges associated with financial resources.[26] Housing cooperatives focusing on self-help could be designed to ensure community stewardship of long-term housing affordability and financial sustainability.

This essay provides insight into the physical characteristics of informal housing in small towns in the American South, including the transformations and adaptations of existing housing typologies to fulfill basic needs. Analyzing informal housing structures at multiple scales, from the town or neighborhood to the building scale, this essay advocates for a progressive understanding of these informal practices and encourages planners, urban designers, architects, and policymakers to have an active role in acknowledging and upgrading informal housing practices to improve wellness and quality of life in communities in distress. Successful upgrading strategies need

to empower residents and improve the existing housing quality without promoting unsafe and unhealthy housing conditions. Finally, these progressive upgrading strategies can involve the implementation of flexible policies for incremental housing that would allow communities to solve their evolving and dynamic housing needs in affordable ways and could include small business enterprises that could help stimulate local economy.

Endnotes

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Part IV
Asia

Chapter 26
Understanding "Free-form" Micro-morphology in Informal Settlements

Paul Jones

Abstract Research in informal settlements has focused mainly on larger-scale socio-physical and policy assessments at the expense of minimal research on change in their morphology, especially micro-morphology. Informal settlements transform through the collation of small-scale spatial and physical processes undertaken at the household level. This includes incremental adaptations such as dividing and extending existing rooms, adding a floor and new rooms, attaching verandas, and inserting internal or external stairs to gain upper-level access. These incremental changes occur through a mix of vertical or horizontal adaptations, with the latter having a strong reliance on claiming public and communal spaces. Fluid property and building lines, hyper-functionality, and ad hoc access to services and infrastructure result from the transgression of private and public circulation spaces. Likewise, "new" territorial boundaries are set that define elements driving irregular morphological patterns. Existing planning approaches, design methods, and tools of analysis do not give these determinants due acknowledgment and weight in the analysis of informal settlements. Illustrated by a case study of an informal settlement (kampung) in Bandung, Indonesia, this chapter outlines the importance of understanding small scale, "free-form" micro-morphological change central to the process of informal housing transformation by identifying: (1) the composition and nature of "free-form" micro-morphology, (2) the key drivers determining the free-form irregular micro-morphology patterns, and (3) types of increments used in latter processes. Understanding micro-morphological changes and their patterns are critical as it is through small-scale adaptations driven by myriad self-help initiatives that informal settlements renew and the spontaneous self-organized city emerges.

Keywords Free-form · Micro-morphology · Adaptation · Incremental · Informal settlements

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Since 2008, over 50% of the world's population live in towns and cities. In 2015, approximately, 25% of the world's urban population lived in informal settlements, including slums. This is the equivalent of approximately one billion dwellers globally and is expected to double by 2030.[1] Despite the negativity that characterizes informal settlements and their perception as a major adverse policy problem in the urbanization process, they play a critical role in city development. They provide poor urban residents with a valuable source of affordable and adaptive housing and provide the formal and informal economy with construction and service labor. The informal economy also supplies a diverse range of goods and services, often in niche industries, in smaller quantities of product, and at lower prices than the formal.[2]

Cities transform over time through an interplay of formal, informal, and hybrid practices and processes.[3, 4] The process of urbanization and key drivers of socio-economic change in cities have typically been planned urban renewal and city edge extensions. This includes infill, gentrification, land acquisition programs, special economic development zones, provision of basic services, public and private housing plans, and planning for regional and local open space.[5] However, little attention is given to the role that small-scale micro-adaptations play in urban renewal and upgrading in informal settlements.[6] In this context, transformation is multi-sectoral and multi-scalar, driven by many socioeconomic groups and planning systems; it can be spatial, physical, temporal, and or functional.

The physical form of informal settlements is generally defined by fine-grain, dense, and irregular micro-morphology, with most housing transformation occurring via small human scale socio-physical alterations and adaptations undertaken by residents.[7, 8] The process of housing transformation is typically incremental, where change occurs by dividing existing rooms for sleeping space or recreation, adding a floor for extended family members, inserting a balcony, and reducing and or encroaching on setbacks to add a new room or to insert external stairs to access upper levels. These changes typically occur within a set of locally accepted protocols, whereby the same or similar socio-material and spatial identity is followed. It is typically repeated within an overarching spatial framework, such as 2, 3, 4, or more stories. The horizontal and vertical "bottom–up" transformations undertaken by residents and/or owners often result in transgressing the quasi-legal or legal plot boundaries and building lines. This includes introducing new built forms to the housing façade and gradually moving forward in a piece-meal fashion onto land used for public alleyways. Such changes to the micro-morphology have consequences on the way residents, hawkers, and pedestrians use and interact with modified housing forms and adjoining public spaces, including sociability and economic exchange.[9]

In the above context, this chapter focuses on deepening our understanding of the dynamics and important role of micro-morphology in informal settlements, given it is a key outcome of housing strategies employed by residents. Low-income and marginalized households procure their housing changes through undertaking additions and alterations. As part of this process, changes typically occur in a fashion of being incremental and undertaken in a step-by-step manner. Given the nature of the prevailing order and rules, changes are flexible and responsive and are typically small scale, such as 1–3 m in length, width, and height. Various modules and increments

comprise the micro-morphology of private and public spaces—such as doors, door openings, windows, seating, walls, balconies, pavements, verandas, services, and pockets of unbuilt space. They occur in a "free-form" manner in terms of materiality, aesthetics, shape, and placement.

The case study used to illustrate the narrative in this chapter is the inner-city kampung of Lebak Siliwangi located in Indonesia's third largest city, Bandung. The kampung is the site of the author's research and student work with the Institute of Technology University Bandung (ITB) since 2014. The Tamansari Valley is in north Bandung and divided by the Cikapundung River. Until the mid-1900s, it was a productive agricultural area. It is situated between the Dutch planned city areas to the east and west. Kampung Lebak Siliwangi is located at the northern edge of Tamansari on the western slopes of the Cikapundung River. In 2015, the population was estimated at 4240 persons comprising some 1080 families in eight designated government neighborhood units.[10]

In the nineteenth century, kampung Lebak Siliwangi comprised primarily rice paddies with the land controlled by the Dutch Municipal Government with traditional landowners holding the right to lease land to other settlers. With increasing civil unrest over the spread of Islam in West Java after World War II, migrants moved to the city and the intensive rural-based uses of Tamansari were gradually replaced with small settlements known as kampungs.[11] Over time, family lands were allocated to migrant families for rice farming, while some lands were occupied by squatters. At this time, there was no overall development plan for Lebak Siliwangi, with new subdivisions and dwellings emerging from demand generated by population increase. House-siting was strongly influenced by rice paddy terraces, undulating slopes, existing walkways, and key natural elements such as established trees and the Cikapundung River.[12] Landowners and squatters allowed for "rights-of-way" via connecting pathways (now alleyways) which were dividers between the rice paddies and the increasing clusters of housing. In many instances, these pathways gradually became de facto public lands used for access and pedestrians. They were excluded from the plot boundaries in any land certificates that were processed.

In the absence of enforcement when land ownership was transferred, many new owners would encroach into the alleyway space which were, in effect, family lands or lands with unclear title. The collective impact of the above meant that as plots were sold and subdivided; an increasing number of different alleyway widths, housing, plots, and block configurations emerged. This contributed to a nonlinear alleyway alignment and free-form, micro-morphology.[13] These actions plus vexed concepts of land ownership, public interest, and enforceable boundaries became increasingly ambiguous and unclear. These conditions influenced the evolution of diverse block patterns, such as grid, curvilinear, clustered, and linear. One consequence is that alleyways have become de facto public spaces, thus creating a labyrinth of non-vehicular access ways of varying widths framed by irregular housing frontages and block patterns. (Fig. 26.1)
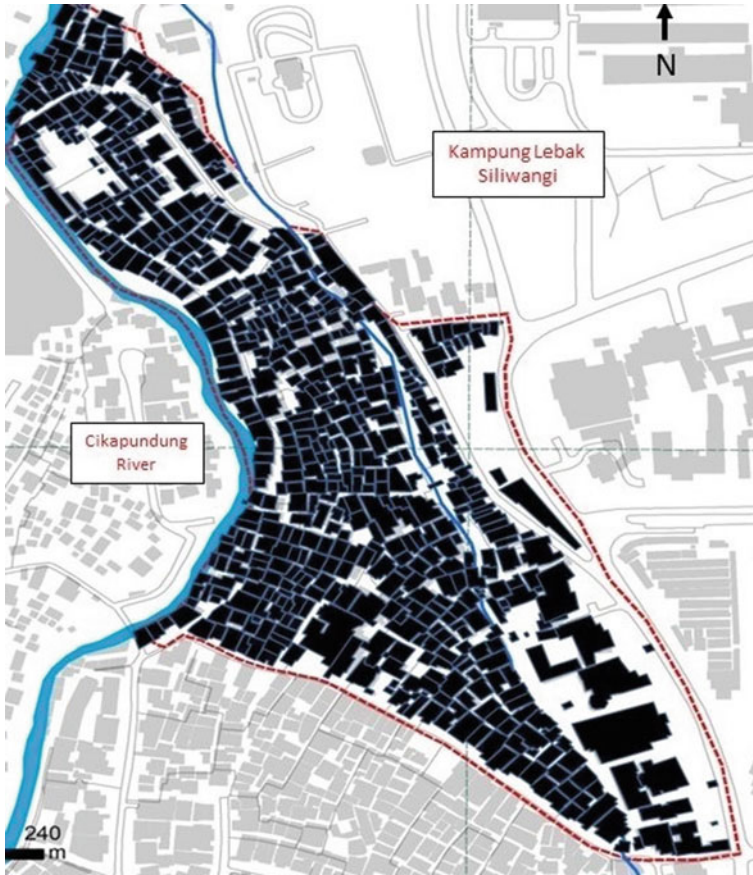
Fig. 26.1 Block patterns in Lebak Siliwangi have evolved from the layout of the original rice paddies and network of pathways (now alleyways) connecting them. *Drawing* Paul Jones

The Status of Research on Micro-morphology in Informal Settlements

A central tenet of this chapter is that informal settlements and their morphology—namely, dwellings and the small-scale physical increments that comprise them, plus plots, blocks and unbuilt spaces, and natural elements—transform through the adding and replacement of small-scale spatial and physical processes undertaken at the household level.[14] Despite the centrality of such practices, research in informal settlements has mainly focused on larger-scale socio-physical and socioeconomic policy assessments. This has often occurred at the expense of minimal research and understanding on change in their physical form, especially the dynamics and role of micro-morphology. There has been limited planning and design education that encourages such interrogation, with much current education in the Global South

using discourses from the Global North and the Global North curriculum and pedagogy, including studios preoccupied with notions of planning the modern western city.

Despite the increasing cohort of Asian planning and design students studying in countries such as Australia, and seeking methods and tools of analysis for application in cities of the Global South, realigning existing systems of mainstream planning curriculum remains problematic.[15] As a result, little attention has been directed to planning and design pedagogies that seek to better understand the dynamic micro-morphological practices and related household adaptation processes—and importantly, how this is expressed in the footprint of growing informal settlements and their relationship to the wider city.[16]

The emphasis in research on informal settlements has focused on larger-scale strategic assessments of policy, governance, and existing features of the informal city.[17] In contrast to deconstructing micro-scale forms and processes of housing adaptation.[18, 19] The latter includes the use of fluid property and building lines, the existence of implied rights-of-way and use, and the multiple means used to access services and infrastructure. In dense informal settlements, micro-scale notions of distance (the length of space between two or more close points) and proximity (a short distance of space or time) become pivotal variables in understanding free-form, micro-morphology patterns.[20] In combination with the use of increments, these variables are manipulated and exploited to the resident's advantage, thus strongly explaining how private and public circulation space are negotiated, new housing facades and frontages are created, and social and territorial boundaries are moved. Housing, spatial forms, and asymmetrical shapes are diverse in informal settlements. Given that morphology is concerned with identifying processes and outcomes of transformation, understanding housing adaptation as produced through free-form, fine-grain built and unbuilt micro-scale forms using myriad increment types is paramount.[21, 22]

In the context of understanding complex arrangements of micro-morphology in informal settlements, free-form refers to the use and process by which irregular shapes and configurations of small-scale physical parts and components (increments) collate to comprise the house. It relates to the footprint of the house on the plot aggregating to form blocks and the public open spaces which connect them. Increments may be curved, linear, and angular, combining unbuilt and built squares, rectangles, circles, triangles, and trapezoids. As a result of their pivotal role as the building blocks of the dwelling and wider morphological elements, irregular and fractal-like form types and configurations emerge through diverse combinations of materiality, aesthetics, placement, and multi-functionality.

The rules ordering these micro-morphological patterns and processes are less recognizable than those that are the hallmark of the formal system. Being nonlinear in nature and expressed in myriad, physical and spatial forms require making sense of complex physical and social relationships. While these arrangements may be viewed as random and exceeding accepted private and public standards for setbacks, materiality, structural, and aesthetic norms, research indicates that local implicit and explicit contextual rules are used to determine their selection, placement, and wider

processes of shaping.[23] As a result, the types of increments, their siting, materiality, functionality, and processes of spatial and physical layering become overt ordering principles on their own; all contribute to free-form, micro-morphological patterns.

The resulting free-form, micro-morphological arrangements contrast with the repetitive use of regular, readily identifiable, and often rigid geometries and morphological shapes in other parts of the formal city. The latter are easy to recognize due to the repetition of accepted mainstream subdivision patterns, zonings, type of public space, and larger-scale building increments which result from enforceable land-use rules, building regulations, and legally defined boundaries. As a result of the free-form nature and composition of the micro-morphology elements as applied in residential buildings and spaces in informal settlements, the application of accepted ordering principles of architecture, planning, and design which preoccupy Western, Euro-centric architecture and design education—namely, axis, symmetry, hierarchy, datum, rhythm, repetition, and orderly transformation—are strongly challenged.

The Processes Determining Free-form Micro-morphology Patterns

The persistence of bottom-up and free-form micro-morphological practices needs to be viewed as an indirect response to formal government systems which are under resourced and limited in capacity relating to affordable housing and secure land tenure. In developing countries such as those in the Asia-Pacific region, governments and pro-development lobbies advocate modernist ideals and standards which aspire to achieve the "contemporary global city." Governments, city planners, and policy-makers do not, however, have the resources and capacity to implement the plans and policies embodying such ideals. Many plans have been copied from foreign geographical jurisdictions. As a result, the content of many plans reflects little appreciation of the socio-cultural and economic diversity of the city in which they are mandated to manage.[24] This results in imported plans and policies that have little understanding of national, city, and local contexts. This approach does not question the underlying values of such urban development tools. Governments, directly and indirectly, impose negative social, ecological, and economic consequences on residents.

In the context of the increasing numbers of households relocating to or developing informal settlements, the households construct, alter, and extend their dwellings by using small-scale increments as resources, support, and opportunities become available. This includes:

- Mobilization of infrastructure and services
- Availability of material resources
- Availability of household labor and community organization
- Changes in the life cycle needs
- Household capital and budgets
- Permission of landowners and/or the authority of the owners of buildings in which they reside[25]

In this setting, the use and collation of free-form, small-scale increments at the household level becomes easier to understand, especially given matters of materiality, and aesthetics are not major concerns in the assemblage process. As the processes of adaptation are unique to each household, they will occur in a nonlinear and random fashion, with one result being the production of diverse physical geometries at the household, plot, block, and wider settlement level. The typical house in Lebak Siliwangi, for example, is made of brick, timber, tile roofing, and the occasional use of bamboo walls with wooden and concrete flooring. Some bathroom and toilet facilities are permanent public infrastructure provided in strategic locations on major connecting alleyways. Small increments such as greenery and drop-down bamboo shutters, for example, are added to existing windows. They are multifunctional by providing light and ventilation, while accommodating mini-stores.

In Lebak Siliwangi, the micro-morphology includes built units comprising houses and plots, blocks, and other religious and social infrastructure such as mosques. Importantly, it also includes unbuilt space (private and public) such as alleyways, external circulatory roads, pockets of open spaces, and a major irrigation channel. Furthermore, the natural topography and infrastructure form part of the morphology, such as the major north–south Cikapundung River and long-standing trees, causing dwellings to amend form and alleyways to deviate. In this context, there are four main components of the housing adaptation process that alter the assemblage's physical and socioeconomic configuration. These are as follows: the built and the unbuilt form of the dwelling (private) as located on the plot, the fluid plotline (which can also be the building line), and the unbuilt public form (such as alleyways). In informal settlements, all free-form, micro-morphological changes leverage the relationship between these variables, especially the role of the often-ambiguous plot and building line that residents take advantage of to maximize their built and unbuilt space.(Fig. 26.2)

Understanding the micro-scale horizontal and vertical intensification processes at the individual plot level (private) and their impact on adjoining alleyway spaces (public) is fundamental to explaining morphological patterns. Set against contested
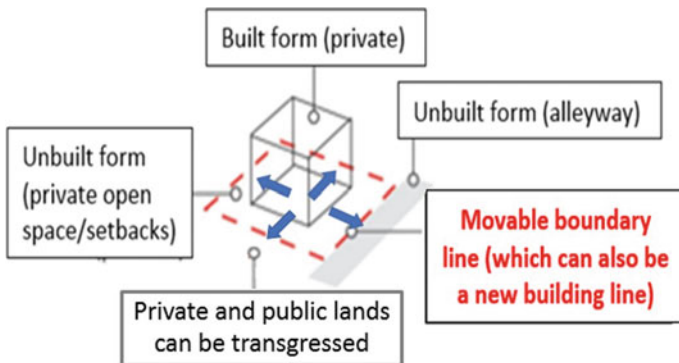
Fig. 26.2 Private and public spaces are negotiated and contested by decreasing and increasing setbacks, changing plot boundaries and new building lines. *Diagram* Paul Jones

notions of how residents constitute space and form as private, public, communal, semi-public, and shared, Jones (2019) identified four primary interface types by which residents "push" their boundaries to gain greater built and unbuilt space.[26] These are defined as: (1) setback from the plot boundary, (2) aligned with the edge of the plot boundary, (3) set above and over the building footprint, and (4) set forward of the plot boundary at ground level. These are summarized in Fig. 26.3.

These interface types can occur in various spatial combinations, such as part setback and aligned, or part aligned, and part set forward, and are all expressed as part of the process of interface creep.[28] Through the collation of increments, this important concept explains how horizontal and vertical housing changes gradually alter the building footprint forward and upward, continually redefining the edge and interface between the private built and unbuilt spaces (the built dwelling form, their frontages and any open space areas, for example) and the public spaces. While the

Fig. 26.3 Four primary interface types by which residents extend their built and unbuilt space. *Author* Paul Jones[27]
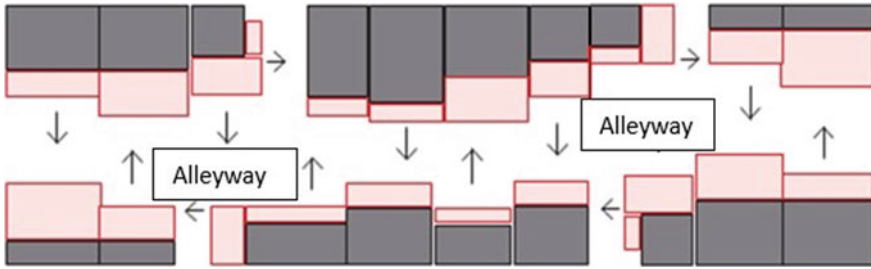
Fig. 26.4 Concept of interface creep identifies the incremental processes by which household and public and communal spaces change. *Drawing* Paul Jones

built form and spaces of the dwelling are being reshaped by processes of interface creep, so too is the alleyway alignment being reconfigured (Fig. 26.4).

The use of what can be termed "threshold increments" such as doors, windows, walls, and seating including their use, size, placement, and materiality within the setback/set forward interface continuum are adjusted by households to meet life-cycle needs and market demands of landowners. For example, several individual dwellings in Lebak Siliwangi have been amalgamated, renovated, and now used as boarding houses to accommodate students at the adjoining ITB University. The result is that private and public spaces at different scales are in a constant state of renewal, negotiation, and contestation, with boundaries remaining fluid, flexible, and irregular in their micro-morphological composition. New alleyway widths and alignment continue to create the cookie cutter, free-form shape of the alleyway systems, while changing alleyway sociality patterns, hyper-functionality, and ad hoc access to services and infrastructure resulting from new housing plot boundaries. In this context, adaptability and the opportunity to be innovative and creative emerge as key processes and actions central to self-organization. These qualities reveal the micro-morphology changes that occur within a framework of individuals and groups capable of self-organization and strong initiative.[29]

Increments: The Building Blocks of Micro-morphological Change

The main form of micro-morphological adaptation undertaken by residents to housing structures in-situ, impacting the full breadth of their physical and spatial dimensions, occurs through residents undertaking incremental adaptive processes. This allows households to self-manage their socio-cultural and economic needs by altering their physical, social, and economic built and unbuilt spaces. A typology of incremental design and construction in informal settlements comprising six typical increments associated with building additions, renovation, and service connections have been identified in informal settlements, namely extend, attach, replace,

infill, divide, and connect.[30] Depending on their placement and functionality, each increment will have a differing impact on building and micro-morphology, access networks, and open space.

In the context of increments being a form of household-driven upgrading and urban renewal, residents take on multiple roles by being their own planner, designer, architect, and sometimes builder. Through their own endeavors and initiatives, dwellings are renovated and extended in varying forms and levels of structural robustness. As part of this process, housing improvements, tenure security, and land acquisition often occur in the opposite order to what occurs in the formal, regulated system.[31] While formal systems are underpinned by clear land title, ownership, and the services and infrastructure being in place or provided in a timely manner prior to development, the informal system develops through residents making upgrades as needed. Settlers move onto and secure land, housing, and land leases to gain shelter and land security, and then construct their homes.[32, 33]

Through examining micro-morphological practices in Lebak Siliwangi, Fig. 26.5 summarizes the main increments that residents use in the ongoing housing upgrading and renewal processes while concurrently reshaping and renewing the micro-morphology. Six main types of increments for housing adaptation are identified, namely, (1) adding floors with walls and ceilings, (2) inserting external access stairs, (3) reusing built and unbuilt space through plot amalgamation or subdivision, (4) attaching new services, (5) retaining open space and adding verandas, (6) adding temporary or mobile form elements such as hand carts and food stands within a setback and or at the front of the dwelling in the alleyway, and (7) set forward practices. Through these multiple incremental and small-scale adaptation processes, housing and public spaces are modified, transitioning from one type to another.

This arrangement of multiple increment types utilizing both built and unbuilt space is predicated on man-made, fluid notions of land boundaries, building lines, rights-of-way, and free use. Collectively, the interpretation of such concepts adds to the diverse free-form nature of the micro-morphology at the household, alleyway, plot, block, and kampung levels. Multiple increments of varying materiality and functionality mean myriad morphological configurations. Hence, the notion of free-form, micro-morphology must be seen to exist not only in the arrangement of small-scale increments of physical forms but also in the context of its cumulative impacts at larger scales such as the block, public space types, settlement, and the wider city. These concepts are fundamental to understanding the self-organized city.

Conclusion

The "free-form" micro-morphology patterns characterizing informal settlements reflect a resilient city and its multiple planning systems which span the formal/informal binary. They are indirectly supportive to varying degrees of diverse socio-cultural groups who adapt and transform their settings to changing social, economic, and physical conditions.[35] While governments, standards, and rules

Fig. 26.5 Main increments of housing upgrading and renewal. *Author* Paul Jones.[34]

contained in their plans and policies aspire to the production of orderly, well serviced, and quality constructed upgraded settlements in the pursuit of "formalizing the informal," the attainment of such goals remains out of reach for much of the marginalized population living in informal settlements.[36] Governments with limited capacity and dysfunctional institutions are reluctant to devolve and decentralize responsibility to local levels for upgrades, such as securing separate land titles and establishing credit facilities to incrementally finance housing alterations and additions.[37] Despite the prevalence of many well-intentioned policies and the rhetoric contained therein, governments, planners, and policymakers are forced to tolerate "free-form" informal settlements as the default status quo position as they are important in providing affordable housing, including self-organized upgrading.

In this setting, irregular micro-morphology driven by the needs of residents challenges the formal spatial planning system to be more responsive, flexible and accountable whilst providing certainty. It poses many questions; what is the basis of formal codes? Whose views do they represent? What forms can upgrading take? Who is best to judge aesthetics and material options? The latter issues are valid questions, notwithstanding the interrelated issues of structural effectiveness, inclusiveness, good governance, sustainability, and the vexed public interest. As the demand for affordable housing—including the building of new units produced by slum upgrading projects—outstrips demand, there is an urgent need to support and understand existing housing adaptation and transformation processes as part of the self-organized city. Central to this inquiry is an appreciation of how bottom-up housing change occurs through micro-morphological processes and outcomes unfolding across fluid and blurry notions of private and public spaces.

By interrogating the micro-morphological fragments and free-form heterogeneity of the city, the principles of modernism based on continuity, uniformity, and regularity of geometries are questioned. It leads us to both reflect on and construct new spatial conceptions on the way we understand the city and the many agents who build and shape it.[38] Noting that patterns of urbanism forming the city are much more complex and fluid than what initially appears, we can view urban form as comprising both regular geometries and organic shapes marked by multiplicity, as well as pluralist increments in varying combinations and scales. This process, whereby the city is first and foremost a cultural product as part of a complex system, allows us to identify and understand clear spatial and physical patterns while differentiating others. In this context, free-form micro-morphological built and unbuilt increments play a central role in housing adaptation and the wider transformation process of informal settlements and the city.

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Chapter 27
Informality and the Production of Publicness in India

Vikas Mehta

Abstract Informality is the quintessential reality of urban life in India. Apparent in every facet of the city—living, working, and exchange—informality is omnipresent in all physical and social structures of the city. It is present in infrastructures, services, and most importantly, in social, political, and economic interactions. Many of these interactions are visible in public life, maintaining a symbiotic relationship with public space. Moving through the city, one can experience how informality is a key generator of publicness—the core value of public space. Informal processes, visible in public space in India, demonstrate how the use of space, accompanied by the temporal patterns, creates access, agency, intersubjectivity, and inclusion for diverse individuals and groups in the city. This chapter discusses the intersection of informality and publicness. Building on Jane Jensen's five dimensions of social cohesion—belonging, inclusion, participation, recognition, and legitimacy—it shows how informal processes offer a set of complex interactions that are an important building block of urban social order—one of the ultimate goals of public space.[1] It demonstrates how public space becomes the vessel for informal practices that are generated by numerous publics in their need to work, play, socialize, demand justice, or just survive. A detailed analysis of behavior and interactions in public space in India reveals a hybrid, negotiated, and fluid space of access and inclusion, exchange and intersubjectivity, and agency—a publicness generated by informality.

Keywords Public space · Urban India · Publicness · Informality · Agency

Public Space and Publicness

Publicness is a central characteristic and core value of public space—a barometer to gauge the pulse of the public sphere—that many scholars have variously described. Among the notable definitions and criteria, Benn and Gaus emphasize access, agency, and interest[2]; Young urges us to look for accessibility, inclusion,

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and tolerance of difference[3]; Kohn proposes ownership, accessibility, and intersubjectivity[4]; and De Magalhães suggests publicness be understood through the rules, codes of behavior, and mechanisms that afford or hinder a set of rights—of access, use, and control/ownership.[5] The three common themes tying these and other conceptions of public space and publicness are as follows: equity of access to public space (access and inclusion); the feeling of a sense of ownership by the ability to make changes in space and to use it in ways that are useful and seen appropriate by different individuals and groups (agency and use); and the ability for individuals and groups of different backgrounds or outlooks to passively or actively interact in space. These themes, particularly the last one, also overlap with the literature on social integration and social cohesion that has been discussed in the context of public space.[6] Scholars emphasize the power of weak ties and build on the understandings of Durkheim, where weak ties are viewed as an indispensable bridging mechanism between individuals and groups within undifferentiated groups and large complex differentiated groups.[7,8] One of the frameworks of relevance in the context of public space is Jensen's five dimensions of social cohesion. She theorizes that social cohesion can be measured by the way it negotiates five dimensions understood as bipolar word pairs—belonging–isolation, inclusion–exclusion, participation–non-involvement, recognition–rejection, and legitimacy–illegitimacy. Combined, these frameworks of publicness and dimensions of social cohesion provide a way to examine public life, public space, and publicness.

Informality: The Organizing Structure of Urbanization in India

In the twenty-first century, one-third of global urban dwellers live in self-made settlements,[9] and in the developing world, informality dominates overall urbanization.[10] Scholars have explained urban informality as "an organizing logic" for urban transformation and emphasized the role of informality in the production of urban space, or as a means of contestation.[11,12,13] Yet others help us understand informality in the context of the political economy.[14] Recently, extending the political economy approach, scholars have called for considering informality as a site of critical analysis.[15] These roles and dimensions of informality and others are visible in India, where informality is fundamental to all urban processes. It forms the organizing structure of daily life. Informality is also deeply interconnected with formal processes, and the blurred boundaries between the two help support robust sectors.[16,17] As a prime example, most of the retail sector in India is informal.[18] As expected, markets and commercial streets house a wide range of private formal and fixed shops. As part of the institutionally recognized structure, their legitimate existence gives these business owners a hegemony over the market or street. Yet, the public space in the market or on the street itself is occupied and claimed by numerous other floating or fleeting independent actors that represent the informality of the retail sector. The

Fig. 27.1 Informal retailers expand the diversity of goods and services which attracts more potential customers to public space. *Photo* Binita Mahato

market or commercial street is usually bustling with the presence of vendors selling food, small household goods, and other services, makers and menders, cleaners, and many more. These informal retailers are deemed illegal in many locations, and they understand their vulnerability. In order not to compete with the fixed shops, they supplement the type, range, and price of goods and services not offered by the shops. This expands the diversity of goods and services and thus attracts more potential customers to the market or commercial street, benefiting the clientele, the formal shop owners, and the informal sector (Fig. 27.1). Since the informal retailers are not bound to their premises, they have another advantage. They can bring goods and services to urban space that is not strictly intended for commerce. This agility of the informal retailers allows them to bring goods and services to residential, educational, industrial, and other urban space as well as those of mobility and flow, providing the ubiquity of amenities citywide.

Intersection of Informality and Public Space

In urban space in India, informality is intertwined with public space. Traversing the city, one can experience how informal processes that are part of everyday existence—living, working, moving, and playing—use public space as the spatial territory for negotiating these processes. In doing so, public space in India, and much of the Global

South, takes on the distinct and primary role of being the terrain for spontaneity and liminal practices. In Indian cities, at first glance, urban space displays a geography of separation: the affluent and middle class control access and restrict access for the service class into their neighborhoods and other social spaces, such as clubs and shopping malls. Yet, the affluent and middle class depend on the service class for the labor to maintain their lifestyles and consumption and leisure practices.[19] To do so, the service class is given access to urban space, particularly the contemporary urban space of mass consumption, for providing services to their clientele. On the other hand, the service class depends on the middle class for economic survival. The interrelationship between the classes is neither hostile nor friendly but accommodating, and much of this interrelationship and its details become visible in public space.[20]

Public space is at the core of the social and economic workings of the neighborhood and the city. It is a place for daily activities, rituals, and survival: a place for walking, sitting, standing, lingering, selling, buying, sleeping, grooming, cooking, eating, washing, cleaning, preaching, praying, panhandling, playing, and more (Fig. 27.2). The informality in public space is a result of many cultural and political factors and is manifested in multitudes of the fixed, floating, and fleeting realms. In the pre-automobile old (inner) city neighborhoods or the slums (informal settlements) where urban form displays an "organic" order, the intersectionality and interdependence of urban space and informal processes are expected. Considerable urban form, though, generated in a rapidly urbanizing country follows a rational and ordered post-colonial structure. It is here that the weaving of informal processes and the hegemony of informality become glaringly visible. The ordered post-colonial forms and spaces overlap with a localized use of space based on native social and cultural practices and customs.

Fig. 27.2 Public space is a place for formal and informal daily activities, rituals, and survival. *Photo* Binita Mahato

Public space makes this juxtaposition most evident as it gets appropriated for daily activities and rituals. In the most visible and central public spaces, such as large parks, *maidans, bazaars,* outdoor markets, and commercial streets, the activities, actions, and patterns of use generate an intense and over-stimulated experience.[21] The visual, aural, olfactory, and tactile create a sensory overload, and the public spaces are bustling (Fig. 27.3). The more parochial, predominantly neighborhood public spaces, such as residential streets, *chowks,* neighborhood parks, and playgrounds, display their own intersection of space with informal social practices. Absent the hyperintensity, these neighborhood public spaces, nevertheless, become sites of social practices by appropriation: The street corner gets used for the morning milk sale or the clothes ironing services during the day; a tree in the park or a corner of a *chowk* becomes the permanent site for a shrine; the fruit and vegetable sellers park their carts on the street and announce their arrival; and clothes are dried on lines that are strung across alleys or on the fences of parks. Numerous other adaptations of public space continue throughout the day and week as localized needs, and negotiations welcome informal processes to serve everyday life.

Informality also acts as another layer of human-scaled activity in space that helps in pedestrianizing and slowing down public space. The floating and fleeting vendors, entertainers, soothsayers, panhandlers, and others occupy opportune locations in public space to create small nodes. These nodes may extend from the edges of

Fig. 27.3 In India, the visual, aural, olfactory, and the tactile create a sensory overload and the public spaces are bustling. *Photo* Vikas Mehta

Fig. 27.4 Floating and fleeting vendors, entertainers, soothsayers, panhandlers, and others create small nodes in public space and anchor activities. *Photo* Shilpa Mehta

sidewalks well into parts of the roadway to anchor stationary activities (Fig. 27.4). Collectively, this occupancy of public space along with the mixing of several modes of travel (bicycles, hand-pulled rickshaws, carts, and more) alters the rhythms of public space and does not favor speed. Movement through public space is fraught with encounters. The slow-moving body is forced to actively or passively participate in public space—to assimilate stimuli and interactions as it moves through public space. Through such social practices of communication and negotiation, the body becomes both a consumer and a producer of stimuli, interactions, and meanings. This slow speed results in multiple and various types of encounters and social interactions among different publics.

Visible Informality and the Production of Publicness

The coexistence of formal and informal practices in public space is a result of elaborate negotiations among its myriad actors—landlords, tenants, shop keepers, vendors, entertainers, panhandlers, street cleaners, municipal authorities, police, residents, customers, and more. Numerous symbiotic relationships exist among these actors in public space. Adaptability requires interactions among public spaces by following

institutionalized regulations and those that do so by self-made rules based on social and economic needs. Although conflicts frequently occur and most actors must fight for a right to public space, this informality is not primarily characterized by insurgency. Rather, it operates on complex modes of negotiation, delivering agency for many to accommodate multiple uses across the day and week, inspired by the latent needs of the neighborhood and city. These interactions lead to more social compacts demonstrating how various seemingly incongruent groups have the ability to cohabit public space.

Informality is most apparent as a function of flux. It manifests in public space through economic transactions and labor; survival and sustenance; political awareness, information, and protest; and cultural expression, recreation, and play. Over the day and week, public space gets occupied and claimed by numerous independent actors: vendors selling household goods, other services, and unprepared and prepared foods; makers and menders of goods, including locksmiths, cobblers, potters, and mechanics; traveling entertainers and performers; soothsayers and ascetics; trash collectors; panhandlers; and more. These informal processes demonstrate that the use of space creates access, inclusion, tolerance, intersubjectivity, and agency for diverse groups in the production of publicness that is analogous to the fundamental ideals of public space advocated by scholars. Through this manifestation, informality serves the many roles of public space by providing a platform for belonging, inclusion, participation, recognition, and legitimacy for those who are otherwise excluded and segregated due to class, income, religion, sex, physical ability, and more.

Participation

With the informal processes of bringing goods and services, the service class actively participates in the economy. The visibility of the actors and processes also acts as a powerful communication system. The informal processes predominantly serve the affluent and middle class, but they also expand the range of services and goods and make public space useful and meaningful for many who are part of the underclass. This, in return, increases the diversity, difference, and participation of many classes in public space (Fig. 27.5).

Legitimacy

By using public space, vendors and other individuals and groups generate a source of revenue by almost always requiring only temporary rights to public space with little overhead to operate. Being independent to earn a livelihood, these individuals and groups reduce the burden on the welfare state while establishing legitimacy and their role in society. But informality in India is visible beyond commerce. Musicians, theater groups, and myriad other entertainers move through public space and are a

Fig. 27.5 Informality increases the diversity, difference, and participation of many classes in public space. *Photo* Binita Mahato

part of the daily, weekly, or seasonal rhythms of the city. By bringing recreational activities to neighborhoods, these actors can provide a valuable service that helps them claim legitimacy.

Inclusion

The process of commercial exchange is rife with interactions beyond the act of buying and selling. Streets, for example, are prime public spaces for commerce—the permanent commercial streets in neighborhoods as well as the fleeting weekly, evening, or night markets. Prices are negotiable, and communicating is the norm. Bargaining and the elaborate ritual of negotiation are customary even when shopping for everyday goods (Fig. 27.6). Sometimes, these result in protracted exchanges that go beyond the boundaries of commercial transactions. These cultural norms, then, create a space for social interaction beyond merely the act of commercial transaction; people of different classes become part of the same act, exchanging glances, engaging in conversation, even arguing, coaxing, and cajoling—sometimes even flirting—all resulting in forms of sharing and inclusion in society.

Fig. 27.6 Buying and selling are mired in prolonged exchanges with bargaining and negotiating rituals. *Photo* Binita Mahato

Recognition

Many persons working in the informal sector forgo their secure, but indentured, farming jobs in the countryside to come to the city to be independent. They pride themselves on being independent entrepreneurs, welcoming even meager businesses such as selling tea on a street or square, or ones that require intense manual labor such as cleaning or pulling a rickshaw (Fig. 27.7). By being self-reliant and able to support themselves and their families, they gain much recognition among their peers.

Belonging

The minorities and underclass that support themselves through informal processes of vending, providing services, entertaining, and even panhandling repeatedly become visible in public space (Fig. 27.8). Since these informal services are integral to everyday life, they create co-dependencies between the suppliers and consumers. Their repeated presence affords them a level of trust, acceptance, and belonging to the neighborhoods and communities they serve. The ubiquity of many such persons in public space providing informal services also creates a sense of community and belonging among themselves. By providing the conditions for participation, legitimacy, inclusion, recognition, and belonging, informality generates the prospect for

Fig. 27.7 By being independent and supporting themselves by vending or providing services, the underclass gains recognition with peers. *Photo* Shilpa Mehta

publicness: a more equitable access to public space, a sense of ownership for many more through a distributed agency and wide range of uses, and more opportunities for individuals and groups of different backgrounds and outlooks to passively or actively interact in public space.

Conclusion

The intersection of informality with public space in India reveals a hybrid, negotiated, and fluid space of access, agency, and exchange. Spatial practices constantly evolve to fit changing needs making public space a distinctive environment of complexity and contradictions. Informal practices—unsanctioned actions, activities, and processes—that are inextricably linked to the economy of cities are supported by public space. Indian public space shows us how the city can thrive on the coexistence of diverse groups, activities, forms, objects, and modes of control and negotiation. It operates as a social, cultural, economic, and political space.

There are several takeaways from understanding the intersection of informality and publicness in India. First and foremost, informal processes create the reason and opportunities to be in public and temporarily claim space. Just this ability to be in

Fig. 27.8 Even panhandlers that repeatedly become visible in public space earn the trust, acceptance, and belonging to the neighborhoods and communities. *Photo* Binita Mahato

public space becomes a way for numerous marginalized groups to belong to society and express their right to the city.[22] Because much of informality plays out in public space, it can transform public space to deliver the many aspects of publicness. Second, informality has the potential to be directly and deeply interlinked to the economy of cities. Informality can support the formal economy, and most significantly, it can provide the means of income for a substantial population.[23,24] Third, by exploiting the ubiquity of public spaces and planning multiple uses across the day to use the space to its full capacity and potential, informality can expand the access and reach of goods, services, information, recreation, and other social and economic processes for many. Finally, informality can productively operate beyond the boundaries of informal settlements; several informal processes can coexist in other formal structures by employing localized modes of negotiation.

In the quest for a vibrant public realm, public spaces in the West seek multiplicity, the complexity of form and use, and an enhanced sensorial experience. This, however, is often achieved by creating rules, regulations, and frameworks for temporary and cautiously curated spontaneity. An embrace of informality offers a path toward a more enduring and dynamic public realm. By encouraging informal processes in public spaces, through appropriating space for civic amenities and information, play, temporary businesses, vendors, installations, and more, informality can provide for

the needs of the neighborhood and city. Looking for inspiration in the latent social needs of the neighborhood and city can deter the import of acontextual types and practices. Tactical and inexpensive interventions can help test suitability. Welcoming informality can enhance the occupancy and transactions in public space. It creates certain ambiguities and tolerance that allow for more interpretation and freedom of what is possible in public space, who can claim it, and for which activities. Ultimately, besides its vast gamut of social and economic benefits, informality can become a key initiator of publicness in public space.

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Chapter 28
Desperate City Builders

Jörg Rekittke

Abstract Processing centers for refugees are regarded as temporary and disposable; they occupy otherwise undesirable locations in the landscape and embody unpleasant political messaging. The Moria camp, situated at the Greek island of Lesvos and constituted by disused military barracks, transformed into one of the variously named reception and identification centers in Southern Europe. It made headlines for years because it was hopelessly overcrowded and then burned down after malicious arson in September 2020. In our professional role as spatial designers and landscape architects, as opposed to aid workers, we approached the intricate situation in Moria by bringing the raw figures to the front of our minds. In April 2020, an estimated 21,000 people were insufficiently sheltered by shipping containers, tents, and makeshift structures, while the existing camp facilities had been laid out for 3000 people. The amply documented squalid living conditions in the camp, repeatedly criticized by humanitarian organizations, were unsurprising. Thousands of people lived in makeshift tents of plastic sheeting in an olive grove dubbed "the jungle" outside of the official camp area. While willfully inadequate formal camp planning and management efforts led to a hopeless dead end, this multi-national, multi-ethnic, and multi-religious forced collective of dwellers took spatial and functional development into its own hands. They began transforming the deficient camp structure into a rudimentary city. Camps, on average, remain for decades and often gradually mutate into permanent cities. Until its downfall, the Moria camp became a city of more than 20,000 people—a municipality of desperate city builders.

Keywords Refugee camp · Informal settlement · Informal city · Landscape architecture · Spatial design

When the initial abstract for this chapter had been submitted to the editors, the Moria camp on Lesvos Island, then constituting Europe's largest and most media-exposed refugee camp, housed more than 20,000 people. It was initially a local reception and

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identification center for refugees from October 2015 and among the new "hotspots," serving an EU-run reception center to identify and fingerprint migrants and refugees. The original camp facilities, however, had been laid out for about 3000 people. In August 2018, Catrin Nye from BBC News produced a feature about the Moria camp, titled "The worst refugee camp on earth." The camp became a negative connotation, but it eventually only epitomized a much larger and more widespread geographical, political, and economical phenomenon—the so-called European "refugee crisis." The Greek Island of Lesvos became, over the course of 2015, the epicenter of a massive flow of refugees and migrants. In 2015, approximately, one million border-crossers (refugees, asylum seekers, and other migrants) reached Europe by sea via Greece and Italy. That year, over 800,000 refugees and migrants came via the Aegean Sea from Turkey into Greece, whereas the number of people crossing from North Africa into Italy dropped slightly, from 170,000 in 2014 to around 150,000 in 2015.[1]

Moria Camp

For those who had seen the shameful and completely unsafe conditions in the Moria camp with their own eyes, including our students and faculty members from the Landscape Architecture for Global Sustainability Program (GLA) of the Norwegian University of Life Sciences (NMBU), its demise happened the way it had to—the camp finally burned down, almost entirely, after malicious arson in September 2020.[2] In January of the same year, our team conducted fieldwork in and around the Moria camp as processing centers for refugees present a range of challenging outdoor design problems.

Camps are regarded as temporary and disposable; they occupy otherwise undesirable locations in the landscape; occupants are socially distinct from their hosts, and they embody unpleasant political messaging. Thoughtful spatial design is rarely employed, but it could be. Design exercises based on such settings present a chance for students to face and address some challenging social and environmental issues of the global future.[3] The Moria camp constituted disused military barracks that were transformed into a reception and identification center, and later became one of the "hotspots" in Southern Europe. For many years, the camp made headlines for being hopelessly overcrowded (Fig. 28.1).

The amply documented squalid living conditions in the camp—repeatedly criticized by humanitarian organizations—were unsurprising. Thousands of people, representing most of the camp inhabitants, lived in makeshift tents of plastic sheeting in an olive grove dubbed "the jungle," outside of the official camp area. While willfully inadequate formal camp planning and management efforts led to a hopeless dead end, this multi-national, multi-ethnic, and multi-religious forced collective of dwellers took spatial and functional development into its own hands. Supported by thousands of NGO volunteers and employees, they began transforming the deficient camp structure into a rudimentary city.

Fig. 28.1   Previous Moria camp, Greece, in 2020 housing more than 20,000 people

Camps, on average, often remain for decades and often gradually mutate into permanent cities. In the rather short time of five years, the Moria camp became a city of more than 20,000 people, a motley municipality of informal city builders. Until the urbanizing camp burned down, it constituted the second biggest city on Lesvos Island. Only, Mytilene, the capital of Lesvos Island with about 37,000, was larger. The eponymous Moria district, a part of the Mytilene municipality with its main town located within eyeshot to the former Moria camp, features not more than 1500 inhabitants. The intricate situation in Moria can be illustrated, or rather imagined, by bringing the raw figures to fore.

In April 2020, an estimated 20,000 people were insufficiently sheltered by a few shipping containers, thousands of tents, and all manner of makeshift structures, while the central camp facilities had been laid out for only about 3000. These core facilities, originally military barracks that had been structurally condensed and supplemented by containers over time, constituted the "formal" Moria camp. This compact area was surrounded by a fence with barbed wire, though perforated, which was a remnant of former military use. The formal camp facility, the administrative hotspot as such, was run by EuroRelief, a Greek non-profit, non-governmental organization (NGO).

Hotspots along the southern EU borders were designed to become sites of order, absolute surveillance, and humanitarian care. The intention was to rapidly identify and properly register border-crossers and to divide people into refugees and "deportable subjects." (See Endnote 3) The political intent of *giving form to chaos* remained a pipe dream and an empty promise until the demise of the Moria camp. We were able to bear witness to its end—just a few months before the camp burnt down—once the situation had reached a condition of forbidding chaos.

The Moria camp had become a dreadful place, dramatically overpopulated by desperate, displaced humans. Besides hosting the bureaucratic services and procedures of identification, registration, fast-track readmission processing, and examination of asylum claims, the formal part of the Moria camp was also the locale for a secluded and fenced area, where unaccompanied minors under protective police custody were practically detained. The all-over degree of unacceptability had been

Fig. 28.2 Edge between the small formal part of the previous Moria camp (background) and the large informal sprawl

underscored by the reaction of the majority of humanitarian organizations. They withdrew from the Moria hotspot in protest.[4]

The numbers of camp dwellers in Moria fluctuated. Still, it was evident that only a fraction of the Moria camp population could be housed inside the formal part of the camp. The rest, more than 15,000 people in 2020, dwelled in the informal sprawl of the camp, an olive grove dubbed "the jungle," beyond the official camp. An apt characterization of the informal camp area could be treated in a rather short form (Fig. 28.2). "There is no security; police officers don't come near, and there are fewer services like electricity or sanitation."[5]

During our fieldwork, we were told by an employee of EuroRelief which options were given to those who arrived without entitlement to be housed in the formal part of the camp. This was the case for most new arrivals. After registration, they were offered a tent, if available, and then were asked to choose between the only two options—spheres of "the jungle"—the Arab-speaking realm and the non-Arab-speaking one. This simplistic categorization may sound kind of surreal and cynical, but this is how things were handled in Moria.

With their tent in their hands, the new camp residents then walked into the olive plantation and tried to find a spot where they could rest. The main resource for heating the non-insulated tents in the informal camp—winters are cold and gusty on Lesvos Island—as well as for cooking, was collected or cut firewood. Age-old olive trees, the property and cultural heritage of the local population, were chopped down without permission. The drainage infrastructure of the agricultural plantations became sewers and rubbish dumps. Camp dwellers relieved themselves almost everywhere; toilets were a scarce commodity, resulting in waiting lines often lasting for hours during mornings and evenings. The living conditions in the camp were beyond words (Fig. 28.3). Nevertheless, this place in the middle of nowhere embodied an incredible creative power.

Fig. 28.3 Moria camp, Greece, 2020. Open fires burnt everywhere; rubbish and rubbish bags were omnipresent

Fueled by bare desperation, an adamant will to survive, and egregious human tenaciousness, this energy was directed in a clearly discernible direction. It turned an inoperative, partially formal "camp for refugees" into an abecedarian, self-built, informal "city for migrants." Such dynamics of informality can be found everywhere in the world, but the Moria camp was certainly an extreme. The key difference, however, was based on the fact that Moria was located on European territory. To be precise, it was Greek territory, the land area of a member state of the European Union that is not considered a developing country. The European Union and its member states spend significant amounts of global development aid every year. Yet, in Moria, the economic collective failed to a degree that was hard to imagine.

European Makeshift

In Europe, it was thought that makeshift conditions like in Moria had long been overcome. Those who had to settle and survive in Moria's informal area impressively demonstrated to the aghast European media viewership and others how to create something from almost nothing. Many incoming migrants at the Moria camp made their new, temporary homes using a tarpaulin that they were given at registration;

tents were not always in stock. Such abject starter conditions spurred a flourishing informal house-building market. Those who came with disposable assets—which may be considerably more migrants than the common cliché yields—could purchase a kind of "turn-key" solution in Moria's jungle area. A flimsy, non-isolated "tiny house," made and sold by business-minded camp dwellers, hammered together with wooden slats and plastic foil. The standard price for these dwellings was—at least in January 2020—about 400 Euros. We saw many of these houses in the olive plantations beyond the formal camp.

The workmanship of these expensive abodes was not great, but they featured an essential distinction to a camp tent—they were not tents. Rather, they were substandard houses (Fig. 28.4). The core questions of our chapter are related to this critical difference between a structure and a tent. Why is the European Union, a federation of countries that could afford any form of aid for desperate migrants on the move, offering tents instead of sturdy structures? Most of these migrants never lived in a tent before; many came from large and impressive cities. We are convinced that this constituted an important reason that so many new dwellers in the Moria camp were willing to pay barefaced prizes for something that was at least not considered a typical tent. *Euro* was the currency, whereas *the least dignity*—as measured by Moria league standards—was the equivalent value.

While the official providers of the Moria camp failed in almost every respect, their desperate settlement began to successfully transform, piece-by-piece, from a deficient camp into an inchoate urbanizing settlement. Initially prohibited, all manner of small shops were established. Private cars, in significant numbers, were purchased and used for all sorts of delivery and transportation services. Parking those cars became a serious issue because the only access to the Moria camp was via a small country road without on-site parking.

Providing and consuming self-cooked fresh food, in contrast to queuing for donated food rations packed in aluminum bowls and plastic bags, became important drivers for the growing food stall and restaurant businesses in the Moria camp. One of the largest and best-known informal structures in the camp, located in the Arab-speaking realm beyond the fenced core, was a Middle Eastern restaurant (Fig. 28.5). It was just a large tent, but the customers, including some of our students, did not visit nor stay in a tent. They dined in the best restaurant in the Moria camp.

As measured by Moria standards, a beautiful and grand place that produced and provided a temporary bit of urbanity for customers, instead of the bitter disenchantment in a noisy camp canteen. Not far from the restaurant was one of the best hairdressers' shops of Moria, the Tehran barber and hairdresser (Fig. 28.5). Its owner, a master of his trade, provided professional hair care and high fashion. Offering much more than a just haircut and shave, his services provided a moment of urban lifestyle and dignity. The informal city builders of Moria achieved impressive advancement in a worst-case living environment. Although unable to guard the camp from its nemesis, they contributed to its social cohesion and kept up the spirit of many, as good and as long as possible.

The daytime population of the Moria camp was several thousand more than the nighttime population. A couple of thousand staff—respectively volunteers

Fig. 28.4 Left: Abject starter housing was an uncommon sight for European citizens before the Moria camp was established. Right: More sophisticated, though lacking insulation, a Moria-style "turn-key" house, hammered together with wooden slats and plastic foil, made by business-minded camp dwellers

Fig. 28.5 Left: the best restaurant of the Moria camp. Inside, it was a beautiful and caring place, well-attended, and offering delicious Middle Eastern food. Right: the Tehran barber and hairdresser, providing professional hair care

and adherers—never counted exactly. Numerous non-governmental organizations (NGOs) and other groups provided all sorts of assistance and services in the camp. Perhaps the worst agents of the daytime population, we involuntarily met were the American missionaries who converted Muslims to Christianity. Those unfortunates who accepted to be converted presumably had to agree to a condition—material or monetary aid in exchange for conversion. We did not witness the humiliating act, but overheard their "success stories" on mornings and evenings at our fully booked accommodations.

Moria became an outright "showpiece" for the state's withdrawal from key functions at the border and provisions of basic humanitarian relief. Anja Franck, an economic geographer, asserts that the European, so-called refugee crisis has been exploited for political and economic purposes.[6] The politics of international migration management,[7] resulting in the formal or informal outsourcing of much of the humanitarian relief work to non-state actors, opened up a market in which different players began to literally compete for sympathy, trust, and funding from public and private donors.[8]

In Lesvos during 2016, a reported number of over eighty non-governmental organizations operated through the support of several thousand volunteers. Later, armies of helpers and aides were rounded off by journalists, photographers, media-conscious celebrities, artists, filmmakers, all sorts of activists, and researchers—we regarded ourselves as outdoor-design-researchers, as well as by a significant number of *volun-tourists*. We spoke to one of these passengers at a small facility operated by a Norwegian NGO on Lesvos Island. We asked: What would be next after Moria? She mused, and then said—visibly jaded and crossed—that she was not sure if she wanted to work in Syria, Turkey, or Italy—it would depend on the weather.

Moria was a very cold and uncomfortable place at this time of the year. Everything in Moria was temporary, interim, and volatile, which contributed to its rather urban character. The Moria camp was such a brutally harsh and rugged place, and at the same time, a place of national and ethnic hyper-diversity and hyper-activity. It reminded not only the author, in a peculiar way, of the Old Testament *Tower of Babel* (Fig. 28.6).

Fig. 28.6 Museum visitor's photo of the painting *the Tower of Babel*, painted by Pieter Bruegel the Elder, ca. 1563; Kunsthistorisches museum, Vienna. *Photo* Dguendel, 2016 (Wikimedia creative commons attribution 4.0 international license)

Tower of Babel

A coerced collective, though diverse as it could be, desperately tried to build a tower—an informal city, not glitzy, prosperous, or smart. Everyone could somehow sense that this place had no future, and that no one would become a citizen of it. From the outset, the tower was doomed to fail—unwanted by the local population, unwanted by the European politicians, even unwanted by those who actively built the place—but every day, as long as it existed, it housed many thousands of people. Camp dwellers, hand-in-hand with the helping crowd, continued to build and develop this luckless city.

The biblical tale of the Tower of Babel (Genesis 11:1–9) is an etiology. An etiology is a narrative that explains the origin or cause of a phenomenon. This can be a custom, a ritual, a geographical feature, a name, etc. The Moria camp was not a tale but reality. In hindsight, it could be interpreted as an etiology for the human, reflex-like, desire to transform camps, connoted with their military provenance and temporariness, into cities, connoted with their character of civilization, culture, and permanence. The Tower of Babel was obviously fated to fail due to divine non-acceptability; the Moria camp-to-city was presumably fated to fail due to political non-acceptance, economic insufficiency, and human impatience, or perhaps insufferableness?

Those few who set fire to the Moria camp—a city in the making by more than 20,000 people, probably hoped to be finally brought to a better place—where their hopes for a better life would have come true. In Moria, the desperate dwellers tried to build an informal city. After their *Tower of Moria* vanished in flames, they were provided another camp with tents. This new camp, named the Mavrovouni tent camp, and dubbed "Moria 2.0," is, according to the judgement of aid organizations, even worse than the former Moria camp.[9]

Moria 2.0

A German doctor who works in the new camp reported that a mudscape with rivers and lakes developed when it rained. The camp is located directly on the sea and is exposed to squalls that tear away tarpaulins and destroy tents (Fig. 28.7). Helpers fight to support the tents with wooden pallets so that they are not flooded with mud the next time it rains. The reporting doctor wanted to remain anonymous because a new law by the Greek government prohibits helpers in refugee camps from talking to the media about grievances. Photographers are not allowed on the grounds. In Moria 2.0, inadequate supply and hopelessness shape its atmosphere. In the absence of washing facilities, scabies and lice are ubiquitous, open wounds, abscesses, diarrhea, respiratory diseases, and joint pain arise because of the moisture and poor sleeping quarters. "The living conditions here make you sick," says the doctor. (See Endnote

Fig. 28.7 Location of "Moria 2.0," the new camp housing those who lost their shelter in the Moria fire in September 2020

9) With its strict structure, people in the new camp will be unable to build an informal city again.

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Chapter 29
(In)formal Land Delivery Processes: Relational Perspectives on Squatter Settlements in Kathmandu

Pranita Shrestha

Abstract   The issue of access to land is pivotal to the existence of any settlement—formal or informal. Baross refers to informal settlements as "designated areas of the city where housing development evolved outside the legal framework and regulations that prescribe urban uses and the ways buildings were to be erected."[1] Informal land delivery processes, simplistically called "squatting," are not new. Although they have existed for a long time, very little research has been done to understand exactly how these places evolve and function, the relationship between the institutions (rules and social norms), and actors involved. How do households gain access to land within squatter settlements? This chapter seeks to find answers to this core question within a specific squatter settlement in Kathmandu, Nepal. Adopting a relational perspective, social network analysis was used as a method to understand the evolution of this squatter settlement. One of the key findings demonstrates that a client–patron relationship between households, and local government played a crucial role in the process of accessing land within this squatter settlement. Moreover, the findings also highlight the significance of adopting a relational perspective to understand the evolution of squatter settlements, particularly in relation to providing critical insights on informal land delivery processes.

Keywords Informal land delivery processes · Relational perspective · Social network analysis · Land rights · Access to land

The process of gaining access to land is crucial to the existence of informal settlements. However, there is limited empirically based research on how households gain and secure such access. This chapter aims to understand the informal land delivery processes during the evolution of a particular squatter settlement in Kathmandu, Nepal. A relational perspective is used as a key method to uncover the relationship between institutions (rules and social norms) and actors involved in this process. The chapter provides an overview of informal land delivery processes, describes the research methods used, and focuses on case studies in Nepal. It was not until

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Forms of informal land supply articulation	Definition	Type of land
Non – commercial	"…situations where those who build on it either do not pay for its ownership or use rights or, if they do, the payment is a 'voluntary gift' according to social customs"	Customary land
		Alienated land
		Abandoned land
		Marginal land
Commercial	"…based on the collusion between commercial interests and party politics…not only fills up the pockets of the "middle – man" who sells the plots, but the settlement becomes an opportune target for political patronage and vote gathering when at election time, the issues of legalization or service provision is discussed"	Mini Plots
		Land rentals
		Substandard subdivisions
Administrative	"…the capacity of the state to acquire and dispose of land, change its forms of tenure or regulate its use and development"	Projects
		Rules

Fig. 29.1 Forms of informal land supply articulation and land types. *Author* Pranita Shrestha, Adopted from Baross, 1983

the early 1980s that the actual process of informal access to land was recognized, and research with relatively limited scope began to focus on it.[2] Baross refers to informal settlements as "popular settlements" defined as designated areas of the city where land and housing development evolved *outside the legal framework and regulations*, relying on three possible forms of social articulation for its existence: *non-commercial*, *commercial*, and *administrative* (Fig. 29.1).[3]

Baross argues that during the first stages of growth of a settlement, access to the land types identified above is through non-commercial forms of articulation until the commercial forms penetrate the settlement.[4] Jenkins argues that there is often a coexistence of monetary and non-monetary forms of land acquisition in informal land delivery processes.[5] He further argues that in urban settings, with a high degree of commercialization, even the non-monetary forms tend to become commercialized.[6] Monetary forms such as "gifts," once symbolic, now have taken more commercial or "realizable" value.[7] Baross argues that "the commercial articulation of land supply refers to the land market…where land has a monetary transfer price."[8] Aina also argues that the extent of commercialization of land may give rise to a set of brokers, acting as intermediaries for those holding traditional rights.[9] Similarly, Baross argues:

> …the commercial articulation of government land supply for popular settlements is based on the collusion between commercial interests and party politics…not only fills up the pockets of the "middle—man" who sells the plots, but the settlement becomes an opportune target for political patronage and vote gathering when at election time, the issues of legalization or service provision is discussed.[10]

Mini plots, land rentals, and substandard subdivision of land are three main categories under commercial forms of informal land supply articulation. Similarly, Ward

argues that as soon as the land is occupied it has an exchange value in addition to use value.[11] Baross further refers to the administrative forms of articulation as "the capacity of the state to acquire and dispose land, change its forms of tenure, or regulate its use and development."[12] Within this form of articulation, the two main categories are projects and rules.

In terms of the settlement cycle, Baken and others argue that not all informal settlements survive.[13] The ones that do survive go through an incremental development process that involves legal, physical, and social consolidation. Legal consolidation involves a rise of de facto tenure security attached to residing in these neighborhoods. This is followed by physical consolidation which involves increasing the level of services, infrastructure, and improvement of physical quality of the housing stock.[14] Lastly, social consolidation involves the formation and subsequent refinement of social networks and community-based organizations which function as sources of security and credit, as well as social frameworks for skill formation and reception of new migrants.[15] Baken and others further argue that these three incremental development processes—legal, physical, and social—are strongly interrelated during the life cycle of a particular settlement:

> …the provision of water taps by the government, or payment of tax, may reduce the fear for the demolition squad among inhabitants (a rise in the de facto security of tenure), and, in its turn, higher tenure security may lead to more investment in housing and to residential and physical densification.[16]

Similarly, Jenkins and others classify these settlement consolidation processes into two main categories: *initial access to land* and *securing the legitimacy of land,* whereby the former incorporates legal, and the latter involves physical and social consolidation as per Baken and others.[17] The initial access to land or legal consolidation through de facto tenure security is a key survival strategy for any settlement.

Amis argues that political patronage within the public administration and wider political system is important in providing assurance of protection against demolition for individual allottees during the process of informal allocation of land.[18] Further, he states that the local administration itself is a client of the more powerful political backers.[19] Other more common sources of illegal/informal land acquisition are often through politicians who act through brokers and staff within government agencies responsible for land control or patrons. Van der Linden defines patrons as "those who have some power to influence the allocation of goods and services in favor of their client in exchange for counter services of all sorts."[20] Findings from Van der Linden's study illustrating the crucial role of patrons in the process of informal land acquisition in Pakistan demonstrates how the culture of patronage further increases the client's (most often the urban "poor") dependency on their leaders (patrons).[21]

Similarly, Rakodi argues that although informal land delivery processes occur independently of the state, they do involve interaction with "various arms of the state"—they develop a clientelist relationship with political or bureaucratic patrons, especially at the local, neighborhood level.[22] Razzaz argues that the most compelling attribute of informal settlements as non-compliant, semi-autonomous social fields

(SASFs) is the ability of actors in these settlements to carve out operational niches. These exist within the realm of state rules often taking advantage of inconsistencies and indeterminacies in the rule and the enforcement strategies of the state.[23] Similarly, Beall argues that the social resources of the poor are frequently embedded in asymmetrical social relationships. Engagement with the government simply means reinforcing or exacerbating existing hierarchies or inequalities.[24]

In addition to the patron–client relationship developed with the state or various arms of the state, there is also a similar affiliation with new, development actors such as the non-government organizations (NGOs) during the process of securing the legitimacy of land. NGOs supposedly "emerge when a group of people organize themselves into a social unit" and are enablers of strengthening the process of building civil societies; the nature of the interaction between squatter households and NGOs can be compared to that of a client–patron type.[25] Many of the "aided self-help" housing projects in developing countries (sites and services or squatter upgrading) have been operationalized in squatter settlements either through these agencies, the state, or more recently, through public–private and civil society partnerships. Gugler argues that there are various cultural elements intricately tied with shared identities which distinguish the nature of political alignment in different contexts.[26] He identifies *region of origin*, *religion,* and *caste* as three modes of distinguishing between "we" and "them" based on these shared identities.[27]

Research Method

This research adopts the Baken and Jenkins categorizations (*legal*, *physical,* and *social*; *initial access to land* and *securing the legitimacy of land*) to understand the evolution of a squatter settlement in Kathmandu, Nepal through a relational perspective.[28] The empirical evidence used for herein is part of research fieldwork conducted by the author during 2010 and 2013 over 10 months. The main data collection method involved in-depth interviews with squatter households, local government authorities, and NGOs supplemented by a detailed household survey of the settlement. The selection criterion for the research was based on geographic/administrative locations and entry points. This essay describes one of the three case studies included in the research, including a non-riverside squatter settlement located within a Village District Council (VDC) outside the administrative boundaries of Kathmandu Metropolitan Corporation (KMC) (Fig. 29.2).

The unit of analysis for this research was *households* based on the main research question—How do *households* gain access to land within squatter settlements? Amis argues that informal settlements result in two distinct households' groups: *owners* and *renters*.[29] Similarly, Kellett also recognizes these two distinct groups of households, however, uses his own categories as *invaders*, *purchasers*, *renters,* and *caretakers*.[30] He argues that after the initial occupancy of land by the invaders, the process of consolidation and densification begins where there is the arrival of purchaser and renter households.[31] Based on this, households within the settlement for this research

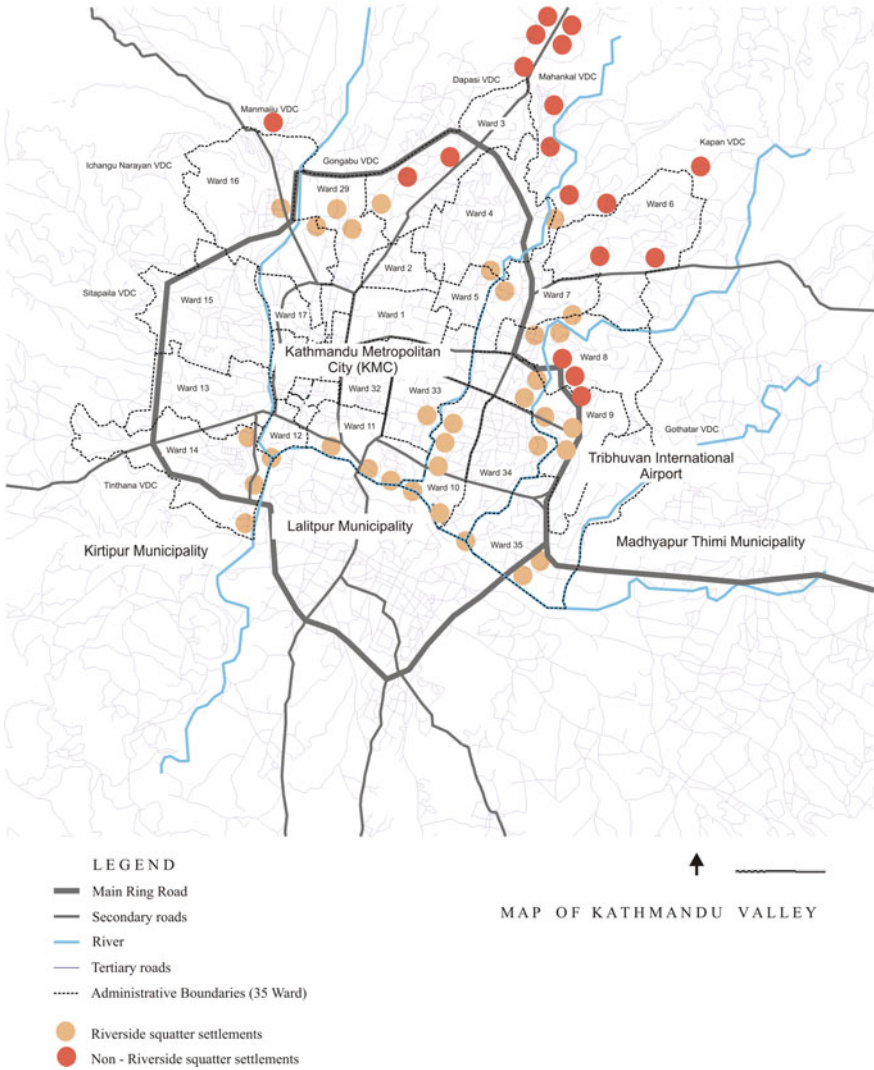**Fig. 29.2** Location of squatter settlements in Kathmandu valley. *Drawing* Pranita Shrestha

were classified into two types: *owners* (which include invaders and purchasers) and *renters* of housing units. The category of owners of housing units is further divided into two: *pioneer* and *consolidator* households. Pioneer households are responsible for the initial occupancy of the land, whereas consolidator households are the ones

that follow pioneer households. Both the pioneer and consolidator households are owners of the housing units, whereas renter households do not own their housing units. The research fieldwork included a detailed household survey of all thirty-six housing units (with at least one household from each taking part in the survey), in-depth interviews with key informants, and focus group discussions. The total population of the settlement was 189, out of which only four were renters.

Context

Kathmandu, with a population of 2.5 million, is one of the rapidly urbanizing cities in South Asia and home to a number of squatter settlements, mostly located along its riverbanks.[32] In the context of Nepal, by definition, squatters or *"sukumbasis"* (in Nepali) are landless people who do not own land elsewhere in the country. Although the population of squatters was only approximately 50,000 in 2009, unofficial figures suggest that they are growing at up 12% per annum.[33] According to a survey done by the Department of Urban Development and Building Construction, there are 53 squatter settlements within Kathmandu Valley, out of which 35 are riverside, and the remaining are non-riverside squatter settlements.[34] More than half of the total number of squatter settlements are located along the riverside, mostly on strips of land left over as a result of the river shrinking in size. The non-riverside squatter settlements are located either on steep, sloping land, or under high-tension electric wires.

   In Nepal, 1951 marks the end of a decade-long, authoritarian Rana regime also referred to as a "semi-colony" of the British in India and the abolition of the traditional land tenure system (*Birta* system).[35] Subsequently, in 1964, the first land reform ended all other forms of land tenure (*Raikar* and *Kipat* systems) except the Guthi system, and two new distinct forms of land ownership structures evolved: *public* and *private*.[36,37] Although at present within the formal legal system, three main forms of land tenure systems (public, private, and Guthi) exist; in practice, the boundaries between the "traditional" and "modern" are quite ambiguous and unclear. This ambiguity and lack of clarity in land ownership structures is the starting point of informal land delivery in the context of Nepal. The National Shelter Policy defines the nature of urban land occupied by squatters as unregistered (*ailani jagga*) or barren (*parthi jagga*) generally located at the banks of the river, unsettled slope, under high tension electric wires, etc.[38] The squatters themselves refer to land occupied by them as the land where one does not pay taxes.
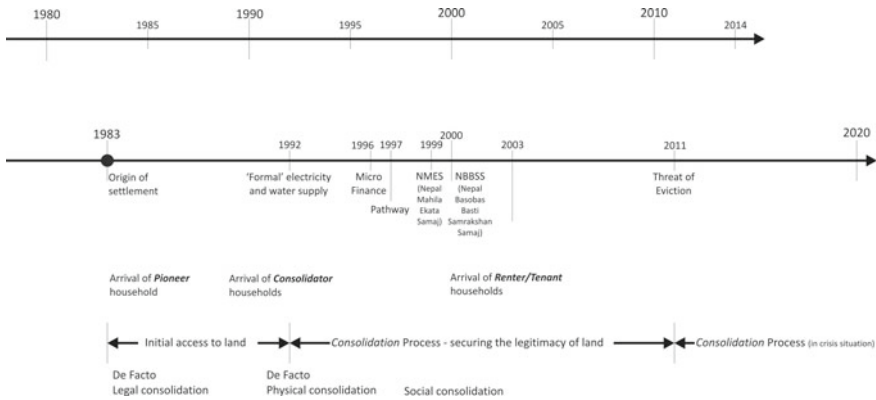
Fig. 29.3 Lifecycle of case study settlement

Evolution of a Squatter Settlement in Kathmandu, Nepal

Based on the Baken and Jenkins categorization, the evolution of this particular squatter settlement in Kathmandu is discussed in two main parts: (i) *initial access to land (legal)* and (ii) *securing the legitimacy of land (physical and social)*.[39] Figure 29.3 illustrates the lifecycle of this settlement which is discussed in detail below:

Initial Access to Land (Legal)

De facto Legal Consolidation—Pioneer Household

The process of initial access to land for this settlement began in 1988 when the pioneer household got de facto access to a piece of land (4–5 annas of *parthi jagga*) through the Village Chief as they were from the same caste.[40] According to the pioneer household,

> We moved to Kathmandu in 1969 from a village in Nepal as my husband found a well-paying driver's job. After arriving in Kathmandu, we lived in rented accommodation near the land that we were later "gifted" by the Village Chief because we were from the same caste.[41,42]

Immediately, after gaining access to this strip of land, the pioneer household created de facto initial security. This was achieved by allocated strips of land behind and in front of their plot that were given to two poor, lower caste households. Further, the pioneer household explains this process,

> The land behind our plot was given to a poor, Kami household, who were introduced to us by our daughter-in-law. Similarly, the land in front of our plot was given to a lady who lived in the neighborhood and was newly married to a poor man.

The pioneer household and the two other poor households built temporary housing structures and relied on neighbors to gain access to basic infrastructure such as water and electricity.

Securing the Legitimacy of Land (Legal)

From three in 1988 to a total of thirty-six households at present, this settlement has grown gradually over time in a linear pattern. Although de facto access to land for each of the remaining consolidator households was unique, the pioneer household sanctioned the final approval.

De facto Legal Consolidation—Initial and Intermediate Consolidator Households
One of the oldest, consolidator households of the settlement "Bajai" (grandmother),

> My husband paid NRs.2000/- for this strip of land 27 years ago. We could have easily got access to land with formal, legal title with that amount of money—I wanted land with formal, legal title elsewhere; however, it was due to my husband, but we got stuck in this settlement.[43] My husband has passed away, and now, I live here with my middle son and his family. I have three sons in total—both my eldest and youngest sons and their families are working abroad and do not wish to come back to live in this settlement.

A consolidator household, a tailor by profession narrated her story as follows,

> We came to know about this plot of land in this settlement through two contact persons (land brokers or "*dallal*") working in a nearby shoe factory. This plot was being flattened for another household; however, we were able to occupy it first. While our temporary housing structure was being built, we stayed in rental accommodation nearby.

Another old lady who had been living in the settlement for a long time told her life story,

> My parents died when I was very young, and my husband's family adopted me. We used to live far from the settlement and gained access to information regarding this strip of land through my husband's friend.

In terms of gaining access to land through commercial or monetary transaction, another consolidator household mentioned,

> We paid approximately NRs. 1000/- for flattening the land and building temporary housing units.

De facto Legal Consolidation—New-Consolidator and Renter Households
This settlement does not allow new consolidator or renter households. An interesting case of a new consolidator was that of a household whose married daughter constructed a new house in the same strip of land. She narrates the process as,

> Few years after I got married, my husband went abroad to work, and I came back to live with my family in the settlement. With the revenue that he sent back home, I started constructing our house within the settlement in an empty plot next to my parent's strip of land.

Another interesting case is that of a renter household, who eventually bought the whole house from the original owner of the house and became a new consolidator household of the settlement. She had bought the house from the previous owner, four months prior to the interview on January 24, 2013,

> I came to know about this settlement through her friend as I was searching for cheap rental space. I lived in one of the rooms of this house with her son; however, now, I have bought the house from the previous owner and have rented the upper floor of my house to two families for NRs. 2000/- per month each.

This is the first phase of initial access to land by pioneer and consolidator households of this settlement. The next phase is securing a de facto legitimacy of land through physical and social consolidation.

Securing the Legitimacy of Land (Physical and Social)

Physical Consolidation

As mentioned above, initial access to water and electricity for the households was through their neighbors. Most households also mentioned that they used candles (*"tuki"*) and water from the stream (*"kuwa"*) nearby when they first started living in the settlement. Temporary housing units took the form of permanent brick and mortar structures only after the arrival of infrastructure in 1992. Almost all the buildings within this settlement are single-story, permanent, residential housing units; only, 8 out of the 36 housing units are two-story, and nine are built in brick/blocks with mud mortar. Most of the housing units are roofed with tin/metal sheets. According to the pioneer household,

> Lumanti, a local NGO was the first to construct a pathway within the settlement; prior to this, they had open drainage and no access road. This was then followed by the arrival of electricity connections and water tanks. Later, the local Village District Council (VDC) donated a water tank to the settlement. At present, a community center, also financed by the VDC, is almost complete and ready for operation.

This pathway constructed by the local NGO is approximately 1 m wide, brick-paved; the main access road to the settlement is a 2–2.5 m-wide finished road. All households within the settlement use public taps for water supply, and most have individual metered electricity connections (except four households using shared electricity). Furthermore, 23 households have access to individual private toilets with pit latrines, whereas the rest use shared toilets. All households were allowed to vote, and many of them have access to birth, marriage, and citizenship certificates through the Village District Council (VDC). The basic requirement for gaining access to these certificates is to confirm your permanent address, which in many cases is difficult for officials to confirm in a squatter settlement. However, in this case, the VDC gave the households this access in return for their votes.

In terms of livelihoods, eight households have regular salaries based on fixed income sources; five households depend on small businesses, and the rest depend on skilled/unskilled wages. The pioneer household has a grocery store in front of their house and a handicraft store on the main road nearby. In front of the pioneer household, the consolidator household has a vegetable stall in front of their house and has also rented the first floor to a cosmetic store. There are liquor and tailor shops near this house. Many households (*"Sunars"*) work with metal in one room of their house within this settlement. Another consolidator household works as a carpenter in his factory (shed) along the main road near the settlement. The tea shop and a small shop within the settlement act as source of income for two other consolidator households. Remittances from abroad are the main source of income for many households within this settlement as at least one member from each household goes abroad to sustain a living.[44]

Social Consolidation

All households within this settlement are active members of grassroots community-based organizations (CBOs) and savings groups. Lumanti established two main CBOs operating within all squatter settlements in Nepal—Nepal Mahila Ekata Samaj (NMES) in 1999 and Nepal Basobas Basti Samrakshran Samaj (NBBSS) in 2000. Within this settlement, there are two main saving groups: Male Savings Group (*"Purush Bachat"*) and known as Settlement Caretaker Committee (*"Tole Sudhar"*) and Cooperatives for Women (*"Sahakari"*). The Male Savings Group was established by Lumanti with the main objective to keep track of housing transactions within the settlement. Although this settlement restricts new and renter households, transaction of housing units is permitted. These transactions occurred under strict, informal rules with written documents and witnesses that were sanctioned by the pioneer household. This committee earns NRs. 10,000/- for each transaction from both buyers and sellers. It is accumulated savings used to maintain public areas within the settlement.

Similarly, all women (except women from renter households) within the settlement are members of Cooperative for Women, also initiated by Lumanti and supported by Action Aid Nepal (an international non-governmental organization—INGO). The initiative began with three main cooperatives limited to Kathmandu Valley, and it has now extended across the country with more than twenty-two cooperatives in total. The pioneer household of this settlement is an active member of one of the first three cooperatives and according to her,

> The initial operating costs for the cooperative was supported by Lumanti; however, they are now self-sustainable. The main terms and conditions for borrowing were as follows: (i) a minimum of 10 members in a group of ladies; (ii) only able to gain access to loans after three months of group formation, and the starting loan amount was NRs. 3000/- (iii) interest rates were 12% with collateral and 16% without collateral. In the beginning, NRs. 50,000/- was

considered a big amount of loan; however, with time, women have become more confident to take loans of up to NRs.300,000/- or more.

In terms of other social infrastructure such as schools and hospitals, most households from the settlement educate their children in nearby public or private schools and hospitals.

Conclusion

How do households gain access to land within squatter settlements? The main purpose of this research was to understand how households gained initial and secured de facto access to land within a particular squatter settlement in Kathmandu, Nepal. The two key findings are summarized below:

Type of Land and Informal Transactions: The above case study shows that the type of land is crucial to the formation of a squatter settlement. In this specific case, the land occupied by this settlement was marginal or alienated (*parthi jagga*). Moreover, the ambiguous status of land tenure specific to the context of Nepal creates a conducive environment for the informal land market to flourish. Another key contribution of the case study is unpacking non-commercial and commercial modes of informal land supply articulation. These modes are adopted by pioneer and consolidator households during the process of initial de facto access to land.

Significance of Network Linkages and Geographic Proximity: Figs. 29.4 and 29.5 present a diagrammatic summary of using social network analysis to understand the evolution of the case study settlement.

In terms of network linkages, *patron–client*, *kinship*, and *non-kinship* ties were used to gain initial and secure de facto access to land within the settlement. The process of initial de facto, legal access to land was formed through *patron–client* ties between the pioneer household and the Village Chief as they belonged to the same caste. As the settlement grew beyond the pioneer household, examples of *non-kinship* (neighbors, friends, middlemen, contact person, etc.) and *kinship* (family and extended family) ties were used to secure land legitimacy. In addition to these network linkages, *geographic proximity* (either through work or rental accommodations nearby) was also one of the main contributors of providing valuable information regarding access to land. Furthermore, during the process of securing the legitimacy of land in terms of physical and social consolidation, continued *patron–client* ties with local government and non-government organizations were crucial for the survival of this settlement.

This chapter presents only one case study, which is part of a larger research; hence, the above findings are limited to this example.[45] Further research into understanding key issues of heterogeneity and hierarchy within settlements is crucial

Legend

Households:
PH - Pioneer Household
CH - Consolidator Household
NH - New Household

Contact Status:
LG - Local Government (Village District Council - VDC)
CP - Contact Person (kinship and non kinship relations)

Network Location:
----- GP - Geographic Proximity (work; rental accommodation)

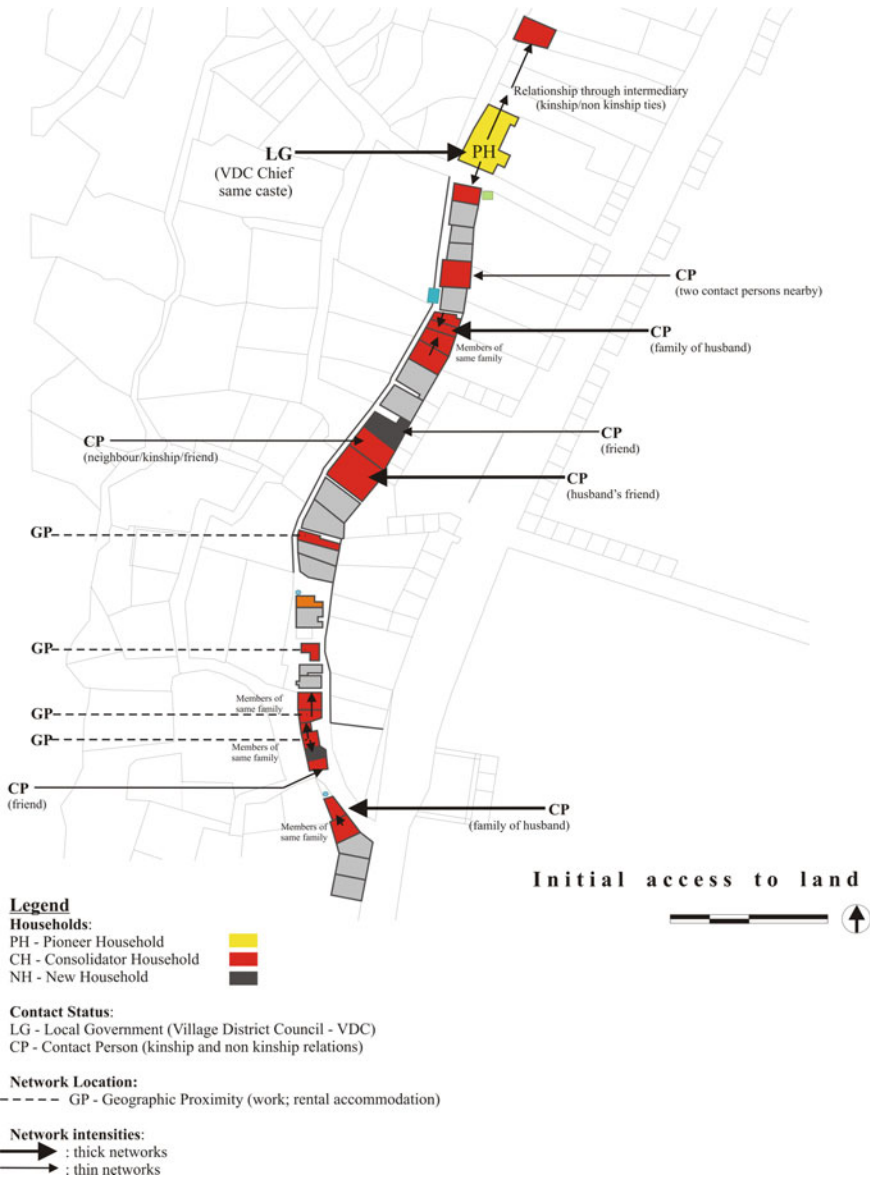Network intensities:
: thick networks
: thin networks

Fig. 29.4 Social network analysis of initial de facto access to land. *Drawing* Pranita Shrestha (base map from KMC)
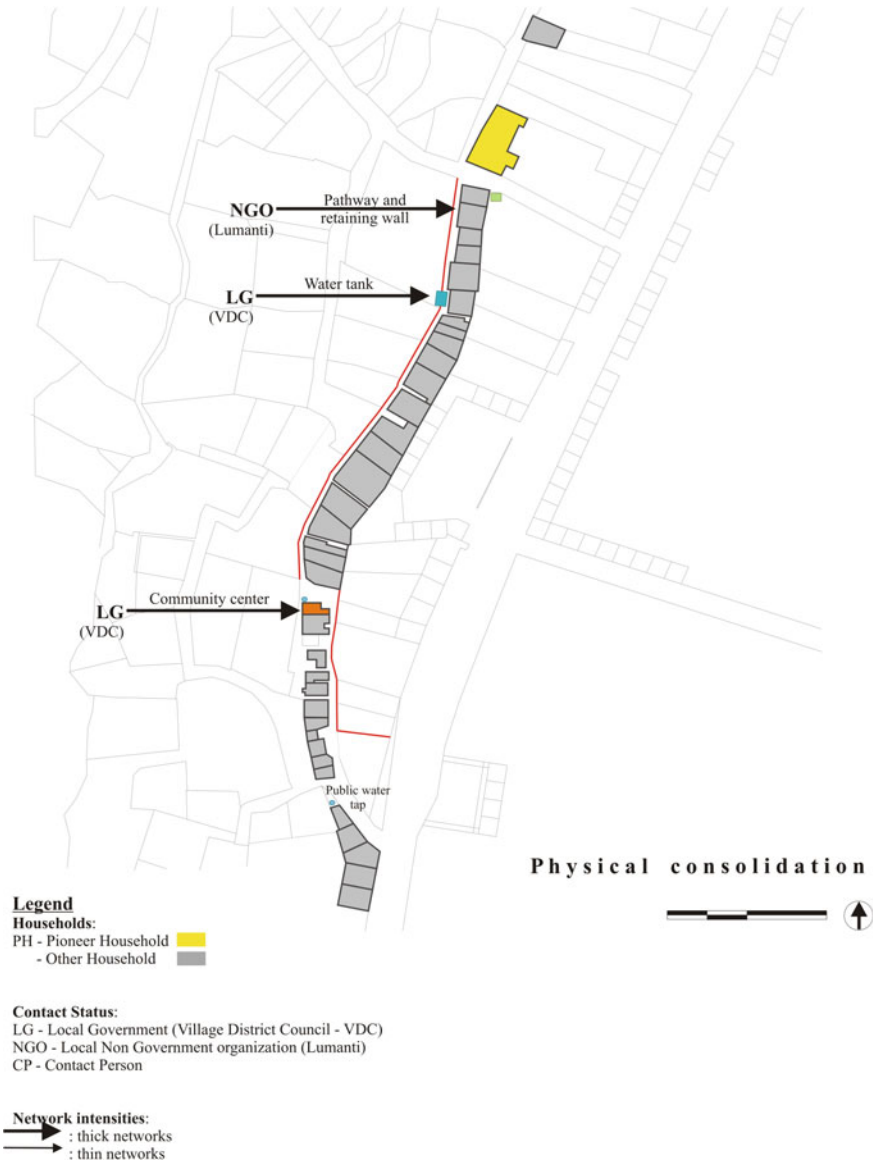
Fig. 29.5 Social network analysis of physical consolidation. *Drawing* Pranita Shrestha (base map from KMC)

for a deeper understanding of settlement typology and inclusive policy interventions. These issues are also argued by Mitlin who observes that "clientelist relations reinforce undemocratic leadership at the community level."[46]

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33. KMC, 2001. Kathmandu Metropolitan City.

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35. Traditionally in Nepal, there are two main forms of land tenure systems: Raikar and Kipat. In the Raikar system, land is considered a property of the state—system of state landlordism. Whereas the Kipat system (diametrically opposite to the earlier system), is based on communal ownership of land by virtue of

membership in a particular ethnic group and location in a particular area. (Regmi, Mahesh Chandra. Landownership in Nepal. Univ of California Press, 1976.)

36. The 1964 land reform explicitly defined the status of landowners and established land administration based on Parcel—Based Deeds Registration System. This systematic and compulsory land registration system is based on cadastral maps with unique real estate identifiers (parcel number) and land ownership certificate *('lalpurja')* distributed to the owners. Prior to 1965, land records were based on a verbal description in a defined area. (Acharya, Babu Ram. "Adopting geo-ICT for land administration: Problems and solutions." In the 7th FIG Conference, Spatial Data Serving People: Land Governance and the Environment–Building the Capacity. 2009.)

37. Land tenure system is a form of institutional land ownership (religious and charitable)

38. Ministry of Urban Development. National Shelter Policy; Government of Nepal: Kathmandu, Nepal; Bara Offset Press: Kathmandu, Nepal, 2012.

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40. 1 anna = 31.79 sq m

41. Please note all interviews with households were conducted in Nepali and translated to English.

42. The country is a heterogeneous society with a complex ethnic mix, overlaid by social and economic opportunity disparities. The first category comprises mainly Bahun, Thakuri, Chhetri, Rajput, and Shrestha; whereas the second category comprises Matwali and other ethnic groups. Nepal's caste structure also contributes to exclusion; under this system, people are born with certain privileges and obligations with respect to education they seek, the occupation they can pursue, and so forth; hence the ethnic minorities in the capital Kathmandu are disadvantaged and excluded by default. Social relationships in the capital are greatly influenced by key dominant *caste values* and interpersonal styles, and more prominent among these is the requirement of memberships in appropriate social groups that are called "*afno mannche.*" (Bista, Dor Bahadur. Fatalism, and Development: Nepal's Struggle for Modernization. Orient Blackswan, 1991.)

43. 1 USD = 116.36 NRs (Nepalese Rupees) 12 Feb 2021

44. Nepal as a country is highly dependent on remittances as a primary source of revenue—31.5% of GDP in 2015 (Sah, Badri Narayan. "Remittance and Economic Development of Nepal." Patan Pragya 5, no. 1 (2019): 196–208.)

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Chapter 30
Meeting Unmet Expectations Revisited: Environmental Management in Indonesian Urban Kampungs after 30 Years

Carla Chifos

Abstract Most urban informal settlements in the Global South disproportionately suffer from poor environmental conditions. Achieving a sustainable interface with the natural environment is often in conflict with the formal mechanisms of the state. The challenge for marginalized communities is how to deal with water provision, sanitation, stormwater runoff, flood prevention, garbage collection, green space, urban agriculture, and air quality without legal recognition by the state or sufficient resources. If these issues are addressed, governments tend to envision large-scale solutions that fail to solve the problems in the informal settlements. I have spent years studying the "meeting of unmet expectations" of a clean, healthy, and safe community in informal settlements, predominately in Indonesia. In the kampungs of Jakarta 30 years ago, most informal settlements in the city were left to their own devices to obtain clean water and deal with sanitation and garbage. Efforts by informal entrepreneurs, community-based organizations, and non-governmental organizations created informal solutions to these issues. This chapter revisits informal and formal solutions to kampung environmental management in Jakarta 30 years ago. It illustrates the changes in development philosophies, environmental management concerns, problem-solving approaches, and participants in meeting expectations for a safe and healthy life in kampungs today. Delving into the interplay between government policies and community-based initiatives of urban environmental management provides insight into approaches that can solve some of the real and perceived inadequacies of urban informal settlements.

Keywords Kampungs · Urban informal settlements · Sustainable development · Climate resilience · Inclusive planning

Environmental quality, health, and safety are sub-standard or non-existent in most poor neighborhoods of cities in the Global South. Most of these poor neighborhoods are considered informal due to non-conformity with an urban plan, disconnection

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from urban infrastructure and services, occupation of land not owned by those using it, and reliance on self-built shelter. They hold the stigma of illegality, hence impermanence, and their residents attract blame for not "behaving correctly." Governments often consider poverty and informality the cause for poor environmental conditions and have assumed the poor residents are not interested in environmental quality.[1] While in reality, these residents living in poor environmental conditions are much more aware of their interface with natural systems than those not face-to-face with these problems. Many governments are slow to provide environmental services to these informal settlements, assuming they will eventually be demolished for proper urban development. This world of urban informality, a limbo for many urban poor, pressures inhabitants to develop survival techniques outside of formal mechanisms.

I lived and worked in Indonesia 30 years ago. There, I spent three years immersing myself into life in the kampungs of Jakarta and witnessed the government and civil society interface with these communities.[2] I was researching an area of emerging interest in cities influenced by the United Nations (UN) sponsored Bruntland Report—the interface of the natural environment, urbanization, and development.[3] Ultimately, what caught my attention was not the lack of government provision of access to clean water, safe disposal of sewage, issues of stormwater runoff and flooding, and waste disposal, but rather, how these quality of life necessities were achieved. In other words, how were "unmet expectations" for a healthy and safe environment being met despite inadequacies in the formal urban management system to facilitate and/or deliver solutions?[4] For this chapter, I return to these questions to explore how intellectually and in practice the natural environment and environmental problems in informal settlements are addressed more recently in Indonesia. A quick review of theories, issues, and viewpoints of urban informality is followed by a concise review of the shifts in urban environmental priorities. The threads of these two sections are integrated to discuss trends and the potential for addressing the environment in informal settlements in general, and then conclude with a discussion of current trends in Indonesia.

Informality in Urban Settlements: Society-State Interactions

Since the emergence of the concept of informality explaining the processes and outcomes of survival by the urban poor and marginalized within the complexity and confusion of highly stressed, rapidly growing, and changing cities of the Global South, debates and reinterpretations of this concept have proliferated.[5] Many authors have recorded and discussed the range of uses of this term, traced the evolution of its meaning and application in the field of urban development and management, and questioned the viability and accuracy of the term and the meaning attributed to it.[6] The concept of informality is applied to economic activities, housing, land tenure—and to a lesser degree—to urban environmental management, through spatial, economic, and political dimensions. Academically, three schools of thought evolved, couching the causes and outcomes of informality in dualism, legality, or structuralism.[7] The

challenge lies in understanding the complexity of reality, for a more critical under-standing of the phenomena, to better inform a planning theory. Hence, problem-solving is more adept and appropriate to this reality. However, the UN definition and use of the term informal influences most governmental policy and donor programs dealing with the poor in the Global South.[8]

Literature and development professionals use multiple terms for the places the UN describes as informal, squatter, shantytown, slum, and other terms specific to country or region. To many, these terms imply abject poverty and hold negative connota-tions. However, all of these places are not in total despair and dysfunction. They are rarely the result of purposeful avoidance of formal/legal avenues, but rather, are due to a plethora of reasons widely discussed in the literature, including non-inclusive structures and practices, globalization and neo-liberal economic and political forces, rapid urbanization, or weak financial and organizational capacity for development.[9] Two schools of thought tend to influence informal settlement policy directions: a place that needs to be fixed and totally rebuilt through top–down government-led mechanisms or a place that showcases creativity and ingenuity of local residents for survival. Informal mechanisms should be celebrated and facilitated; however, dualist conceptualizations do not reflect the messiness of reality.

In reality, the boundaries between formal and informal or top–down and bottom–up are blurry. For the purposes of this chapter, informality reflects a range of realities along the spectrum of possible society-state interactions in shaping urban space and urban life, purposely steering away from simplistic dualism.[10] Any action or outcome not totally within the formal legal state structures for place-making will be considered as having some element of informality. The literature and my experiences reveal a range of types of mechanisms for improving informal settlements that can be found within the range of informal mechanisms such as DIY urbanism, self-help, tactical urbanism, everyday urbanism, pro-poor urban planning, collective organization, co-production, as well as horizontal and vertical partnerships among civil society, the private sector, and government.

In this chapter, the focus of urban informality addresses several issues: what happens after houses are built on whatever land is available? How are the needs related to environmental management addressed? Who and what are the non-formal inputs to identify and address the socio-ecological interactions locally and afar issues?

Urban Sustainability: Human-Environmental Interactions

Before UN sustainable development frameworks were thrust into the global policy arena, the conceptualizations of urban environmental issues were predominately articulated as local urban management and engineering problems. How to get clean water to and wastewater away from houses, what to do with garbage—and to a lesser degree—how to deal with flooding, were considered basic needs. The solutions that cities and development agencies usually promoted were large-scale municipal service provision and management of technical issues. Each issue was allocated to a separate

entity to oversee the construction and management of the service and addressed in isolation from each other and other urban and social aspects. These projects were unwieldy and expensive, so that only select areas in cities benefitted, leaving swaths of underserviced areas and burgeoning environmental problems for cities.

Widespread discussion of sustainability, as formally introduced by the UN in 1992, ushered in an era of heightened attention to the integration of the environment in regard to how development is envisioned and implemented. Of major interest was how this integrated view of development could contribute to poverty alleviation. The UN has continued to build on the concept of sustainability through iterations of large global frameworks, including Agenda 21 (1992), Millennium Development Goals (2000), and most recently, the Sustainable Development Goals (2015). National-level governments have been slow to adopt these frameworks and integrate them into planning and operations due to resistance to change, disbelief in environmental change and degradation, and fear of negatively impacting economic growth. The looming seriousness of climate change inspired international organizations to provide tools, assistance, and resources to cities to address climate mitigation and adaptation, hoping to inspire serious government action.[11]

Much of the agenda of sustainability (and a similar agenda for resilience), has been promoted and enacted through non-governmental organizations (NGOs) and community-based organizations (CBOs). These movements have capitalized on the premise that the local level is where negative impacts are experienced and where actions are implemented to counteract these negative impacts. Therefore, if we think globally and act locally, an inundation of locally conceived and implemented changes and the subsequent replication of these practices in other locations would create a sustainable world. Evolving sustainability pathways rely on these bottom-up initiatives to spark broader participation toward a sustainable future. The breadth of topics falling under urban environmental concerns has expanded due to the awareness-building of these global and local initiatives. The earlier agenda of clean water, sanitation, waste management, and basic urban services is supplemented with stormwater runoff, flooding, air quality, green space, tree coverage, heat island, food access, ecological services, and decarbonization.

Linking Informality and Sustainability for Problem-Solving

People living in informal settlements tend to disproportionately suffer from negative environmental impacts that are exacerbated by the complex relationships among poverty, ecosystems, environmental degradation, resource ownership, and political power.[12] Risks related to climate change are elevated in these sites as they tend to be on hillsides, riversides, or other less desirable lands for development.[13] Coupled with increasing evidence of lack of democracy with respect to access to natural assets and green spaces, informal settlements are a hotbed of environmental injustices.[14]

Environmental problems within informal settlements have not changed much in the last 30 years. However, the conceptualization and prioritization of these issues

by those outside of these settlements has expanded the scope of urban environmental issues and assets addressed. While uneven access to clean water, sanitation, and waste management continue to characterize the urban environmental issues in the Global South, the scope of environmental sustainability issues is starting to converge around the world. Climate change, flooding, stormwater runoff, drought, wildfires, food access, ecological stability are environmental problems facing the poor and the rich. Approaches to solving our broken social-ecological linkages are finding more commonality around the globe. Unfortunately, a discrepancy between the attention to the environment of the rich versus that of the poor is leaving informal settlements behind.

It is increasingly obvious that the state cannot and will not do all that is necessary to address urban environmental issues or protect environmental assets. Additionally, they often fall short of providing a positive umbrella of support and information to encourage these transformations. Studies reveal a mismatch between top–down formal structures to deal with various environmental management, particularly the disconnection between top–down structures for water management and everyday practices in informal settlements.[15] Socially sensitive and inclusive outcomes require local residents to be involved in identifying problems, determining the appropriateness of potential solutions, implementing improvements, and maintenance.

The urban sustainability movement since the early 1990s has emphasized inclusive processes and locally based solutions and actions both out of necessity (lack of government adoption and action) and due to the philosophy of the movement.[16] Informality capitalizes on flexibility, spontaneity, and local knowledge that can be applied to creating place-specific solutions. Environmental problems are connected to regional and sometimes global phenomena and systems, and therefore, will need solutions beyond the local level. However, solutions are not ubiquitous and should vary by physical and social context, requiring local input and often local innovation.

Some observers view life in traditional villages and informal settlements and see less energy and water consumption, smaller ecological footprints, and less garbage generated, pointing to these as models of sustainable living. This type of observation is bolstered by the perception of the informal resident as a hero of creativity and survival.[17] In her call to post-colonialize informality, Varley evokes and warns against the "ecologically noble savage" mentality.[18] Care needs to be taken not to imply informal settlements should stay the way they are because they appear to be environmentally sustainable or to view residents in these communities as able to solve the problems. However, this local place-based population can be tapped for micro-interventions. Even so, how much can you expect from a population that does not own the land or the resources that they are expected to manage and protect? The complexity and external connections of the problems and solutions will require a collaborative and inclusive approach, an inclusive approach to green growth.[19] There also needs to be a reconciliation between urban green/sustainability/climate agendas and informal settlement upgrading agendas.

Informal Solutions to Urban Environmental Concerns in Jakarta Over 30 Years

Jakarta late 1980s–1990s

In the late 1980s, the majority of residents in the large cities of Indonesia were living in kampungs, urban neighborhoods that were not part of any urban plan and were not totally connected, at least legally, to the city's infrastructure.[20] Not every kampung was populated with poor people and even those with poor populations were not necessarily characterized by severe poverty. There was a wide variety of conditions, populations, and activities in these kampungs, many of which had been in existence for generations.

Since 1969, Indonesia has been known for its Kampung Improvement Program (KIP), the first slum upgrading project in the world.[21] The program was designed to avoid slum clearance and relocation by bringing services to these communities in an attempt to better integrate kampungs into the formal urban fabric. It is a "sites and services" program for already existing houses, focusing on adding roads, footpaths, drainage, water, sanitation, and health and education facilities. KIP combines top–down government structure with reliance on self-help and sweat equity by the kampung residents to construct and maintain the improvements. This strong reliance on the residents was bolstered by an existing tradition of mutual self-help within communities and a dense array of community and semi-government organizations including semi-government social welfare groups, religious groups, youth groups, and co-ops, which are similarly structured across communities.

However, many more kampungs were not upgraded than were, so access to water, sanitation/toilets, and waste management were broadly lacking. These needs were met through an array of solutions, from very basic survival options to informal entrepreneurial solutions. Choices of water sources ranged from the river, private and public wells, buying from informal vendors, buying from neighbors. Then the perceived cleanliness of the water was used in an intricate mental matrix of matching end-use (drinking, cooking, washing, bathing) with water quality. Many households used multiple water sources resulting in significant amounts of time in collecting and filtering and boiling the water and in expenditures per liter of water that were greater than the municipal water (which wasn't available to them). Flooding was not directly addressed; however, KIP also provided materials for building ditches to direct stormwater away from homes, but there was no overall planning for stormwater management.

Few homes had indoor toilets, and if they did, they were not connected to a sewage or septic system. Community facilities with places to bathe, wash clothes and dishes, and use a toilet were common if there was room to build one, or using the river directly was also an option. With respect to solid waste, large amounts of garbage were thrown on the riverbanks to expand the land area of the kampung, or were burned. Very little was taken out of the neighborhood. Many kampungs had locations nearby where they could sell reusable trash items. Some people collected

these items as a source of income, becoming part of the very complex scavenger economy.

A complex web of participants was involved in these three urban forms of environmental management: individuals, informal leaders, non-governmental CBOs, government CBOs, informal entrepreneurs, public service groups, religious groups, donors, military, informal leaders, semi-government leaders, and the various levels of formal. There was minimal government or formal private sector provision of these services. It was a system of place-based solutions cobbled together through various types of informal means with creativity at the household level to decide which aspects of the solutions to use to meet which needs or expectations.

Jakarta 2000–2020

Investigating the more recent interface between environmental issues, kampungs, and informality in Indonesia reveal some changes in top–down environmental priorities, empowerment and involvement of various actors, and views of informality. It is difficult to ascertain how much land or what percentage of the population is allocated to informal settlements in Jakarta, but they still exist and also are more dominant in smaller cities such as Surabaya.[22] In the 2000s demolition of kampungs and relocation of populations to the outskirts of the city was prevalent, driven by flood prevention and beautification programs as well as the neoliberalist approach of the post-Suharto governments favoring free-market forces driving development. In the kampungs, most of the same situations and problems exist. With respect to urban environmental management, new programs and new environmental concerns have adopted new environmental perspectives for planning and policy resulting in more emphasis on a broader range of environmental issues from the top–down. It is less clear if and how the environmental concerns of the residents have changed.

Despite the increase in slum clearance in Jakarta, kampung upgrading has continued through KIP and some new programs that directly target sanitation and water provision. The emphasis is on increasing environmental service provision through community partnerships with the private sector, through reimagined top–down directives reflecting new interests in the socio-ecological interface in the city. In addition to water and sanitation, climate mitigation and adaptation at the neighborhood level have been incentivized. Greening, in name, of all aspects of urban management and services is the newest iteration of socio-ecological approaches for kampungs as well as the city as a whole.

SANIMAS, a national community-based sanitation program was launched in 2003. It is a decentralized approach to improve and increase the provision of sanitation facilities within low-income communities. This program creates local level semi-government organizations to interface with the local community and monitors the program during and after implementation. Projects range from decentralized wastewater treatment solutions, septic tanks, and the reuse of wastewater for irrigation, fertilizer, and biogas production. The community is expected to participate in all stages of planning and implementation and will ultimately be responsible to manage and maintain the new facilities. Several national and international NGOs have played

a facilitating role in this program. BORDA, a southeast Asian NGO, deals with integrated sanitation for low-income communities and provides technical assistance for low-cost decentralized wastewater and sludge management. An Indonesian NGO, the Association of Local Sanitation Organizations (AKSANSI), focuses mostly on the post-construction phase of the program, supporting community-based management. Many problems with the model and the outcomes of SANIMAS have been identified by AKSANSI.[23]

This model of community-based decentralized solutions has been expanded to include water provision through PAMSIMAS, a World Bank community-based water and sanitation program, launched in 2006. While mainly a rural program, it also serves urban informal settlements at the edges of cities. This program focuses on collaboration among the development community, local government institutions, and community participation.[24] The program involves the community at every stage and provides technical assistance and education about water and sanitation and hygiene. Similar to SANIMAS, this project relies on community water supply management associations at the district level (sub-urban level).

In 2012, Indonesia created the Climate Village Program (ProKlim).[25] The objective is to increase awareness and reward community efforts to both mitigate and adapt to climate change. Mitigation activities include waste management, reforestation, energy conservation, and renewable energy sources and adaptation activities include landslide control, food security enhancement, and disease control. Money is available from corporations and donor agencies for community-based projects. Most of the participation is driven by CBOs and NGOs.

Indonesia's national development plan (NUDS) for 2015–2025 includes significant goals for sustainable cities and a Green Cities Program.[26] Among the very ambitious goals of this program are to achieve zero waste, zero water runoff, green transportation, and zero urban slums by 2020 (not yet achieved). This program also highlights the role of the government as provider and facilitator of projects and the community participates in the building and maintenance (as in the previously discussed sanitation and water programs). Early initiatives of the Green Cities Program focused on increasing green open space through reclamation of land and park design, bike paths, LED lighting, promoting bird watching, and awareness building in communities and for corporate responsibility. Green infrastructure solutions to flooding and stormwater run-off are promoted. The objectives of the plan are to be met through public–private community partnerships. The program also allows for acquiring more land for green space through restoration, renewal, and relocation of current uses including informal settlements.

This array of new national-level initiatives suggests trends related to the interface of sustainability and urban informality in Indonesia with respect to process, conceptualization of sustainability and green, and broadening the diversity of involvement. There appears to be a move away from large, centralized infrastructure solutions, especially within the existing urban fabric, which is a positive direction. Smaller decentralized solutions are being promoted, which can be designed to fit the spaces and the needs of each locality. The inclusion of creating usable wastewater treatment

by-products is both positive for the environmental and economic development potential. While these programs espouse collaboration and community partnership, this form of participation more closely resembles "we will tell you how to participate, and you must do the work and continue to maintain these projects."

However, the descriptions of ensuring inclusion at every stage of the project are a positive change from past practices. There seems to be an effort to have more non-government participants. In addition to the communities and their internal organization, there are local, national, and international NGOs encouraged to take stronger roles to provide a much-needed bridge between communities and the government. Private sector participation is also being added, though unclear exactly what that entails. The agendas for the expansion of environmental concerns appear to be driven by external donors and development agencies which is positive, however, the effort to retranslate these for local environmental and socio-economic conditions, and particularly for the realities of life in the kampungs, is weak. Already, as mentioned above, some of these green initiatives have been used to justify kampung demolitions. The poor and marginalized are not truly being considered in most of these green initiatives and appear more appealing to the middle and upper class. Another trend in kampung upgrading appears to be turning a kampung into an asset for the city, promoting it for tourism (to see culturally interesting urban villages) and showcasing how caring the government has been.

Conclusion

This story of Indonesia's reactions to informal settlements is only one partial insight into this realm of informality. Many more stories are needed to collect the gems that can spark new approaches and creative society-state interactions for sustainable placemaking in the face of poverty.

In preparation for the Habitat III international meetings on the state of cities, Michael Cohen proclaimed that it has become clear that formal governance and urban management and the growing acceptance of the neo-liberal approach to development have not improved cities.[27] We need a different pathway. The number of people living in poor informal settlements worldwide is already immense and continues to grow. It is not possible to regularize all settlements or to relocate everyone to new, formal settlements. Therefore, serious efforts to improve conditions in place, in ways that are not purely top–down or purely bottom–up, are collaborative in problem identification and understanding, solution decision-making, and implementation are needed. This can only be realized with more exchange of knowledge and ideas among academics, policymakers, donor agencies, activists, NGOs, companies, and residents of informal settlements. Urban social and environmental systems are complex and interrelated, and instead of trying to simplify them and dominate them, we need to let more variation and diversity of ideas, solutions, and social organizations thrive.

Endnotes

1. Benson et al, and my work.
2. At that time, approximately 80% of Jakarta was kampung, which are informally built urban fabric often following traditional village patterns and techniques. Kampungs are often equated with slums. While all kampungs have elements of informality, they are not all slums, in the sense of abject poverty and marginal living conditions. In some locations a diversity of income levels was living in these communities and many kampungs had benefited from the Kampung Improvements Program which started in the 1960s.
3. Bruntland Report.
4. Chifos, Carla and Ruth Yabes (eds), *Southeast Asian Urban Environments: Structured and Spontaneous.* Tempe, AZ: Arizona State University, Program for Southeast Asian Studies Monograph Series Press, 2000.
5. Attempts to define, and hence measure, informal economies have come a long way. From the 1970s when the term "informal sector" was first coined by Keith Hart (1972) to describe a type of employment that was viewed as falling outside of the modern industrial economy in developing countries
6. Brown and McGranahan, Varley, Benson, Banks et al, Song.
7. Banks et al.
8. The United Nations provides much of the guidance that is adopted by most multilateral and bi-lateral development agencies and increasingly influences country-level programs as well, defines informal settlements/slums as having poverty, lack of public services, lack of land ownership, and marginal/unsafe locations. In practice, as most international development agencies, use the definition by UN-Habitat

   Informal settlements are (often equated with slums): No secure tenure of land or dwellings, Lack of public services and infrastructure, public space, and green space, House not complying with building code or plan, and often precarious geography and environmental conditions.
9. Banks et al.
10. Influenced by the work of Banks, et al.
11. Find info from my SD class.
12. Habitat III issues papers. 22—Informal settlements, New York, 31 May 2015.
13. Satterthwaite, David, Diane Archer, Sarah Colenbrander, David Dodman, Jorgelina Hardoy, Diana Mitlin, and Sheela Patel, "Building resilience to climate change in informal settlements," *One Earth 2*, February 2020.
14. Caputo et al,
15. Diep, Loan, David Dodman, and Priti Parikh, "Green infrastructure in informal settlements through a multiple-level perspective." *Water Alternatives* 12(2), 2019, 554–570. Quote from page 554.
16. My study of this movement in the US highlights this.
17. Hernando de Soto's (1986) appreciation of the entrepreneurial spirit of informal sectors and insistence that national regulations were preventing economic development by forcing large parts of the economy into informality.

18. Varley, 2020, (from Redford, Kent, *The ecologically noble savage*, 15(1), 1991 46–48.
19. Benson et al
20. Descriptions of the situation in Jakarta in the late 1980s–90s are based on my dissertation (Chifos, Carla, 1996, Urban Neighborhoods and the Natural Environment: Examples from the City of Jakarta, Indonesia. Doctoral dissertation, Cornell University) and my chapters in the book (Chifos, Carla and Ruth Yabes (eds) Southeast Asian urban Environments, Structures and Spontaneous, Tempe, AZ: Arizona State University Program for Southeast Asian Studies, Monograph Series Press), as well as other consulting and research carried out by me in the Jakarta during that time.
21. A good description is provided by Holod, Renata and Darl Rastorfer. "Kampung Improvement Programme." In *Architecture and Community*, edited by Renata Holod and Darl Rastorfer. New York: Aperture, 1983.
22. Accounts of Kampungs in Surabaya (refs) nad their approaches to environmental management appear very similar to those of the 1990s. Kampung is not necessarily slum and is still a large percentage of the urban fabric. One study identifies the characteristics in Surabaya slums and finds many characteristics of resilience (Shirleyana, Scott Hawken and Riza Yosia Sunindijo, 2018 "City of Kampumg" risk and resilience in the urban communities of Surabaya, Indonesia. International Journal of building pathology and Adaptation. 36 (5): 534–568. Ernawati, Rita, Happy Ratna Santosa, and Purwanita Setimanti (2014) Community Initiatives in Development Sustainable Settlements, Case Study of Kampang in Surabaya Indonesia. International Journal of Engineering Research and Technology 3(6) 2242–2245.
23. https://aksansi.org/latar-belakang/, https://borda-sea.org/going-nationwide-spreading-community-based-sanitation-in-indonesia/; accessed January 20, 2021.
24. World Bank (2014) PAMSIMAS (penyediaan Air Minum dan sanitasi berbasis masyarakat/Provision of Community Based drinking water and sanitation): Responding to the. Water and Sanitation Challenges in Rural Indonesia. Jakarta: World Bank.
25. (Faedlulloh et al, 2019). Scale issue. Faedlulloh, Dodi, Retnayu Prasetyanti, and Bambang Irawan (2019) "Kampung versus Climate change: the Dynamics of Community Empowerment through the Climate Village Program (ProKlim)." *Journal of Physics: Conference Series,* 1424 012055, 2019.
26. Kirmanto, Djoko, Imam S. ernawi, and Ruchyat Deni Djakapermana. "Indonesia Green City Development Program: An urban reform." Proceedings from 48th ISOCARP Congress, 2012.
27. Cohen, Michael, "From Habitat II to Pachamama: a growing agenda and diminishing expectations for Habitat III." *Environment and Urbanization* 28(1), 2016, 35–48. In this article, Cohen provides a litany of negative trends in cities from 1996–2016, including increased inequalities, increased environmental degradation, deterioration of existing infrastructure, slowing economic growth,

weaking financial strength of local governments, and increased vulnerabilities and risk from climate change impacts.

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Chapter 31
Urban Informality Tactics Through the Layers of Socio-Spatial Connectivity

Yandi Andri Yatmo⬤ **and Paramita Atmodiwirjo**⬤

Abstract Informalities in urban settings are often characterized by the emergence of events and spaces produced by urban actors that are established beyond the formal, predefined urban structure. The emergence of such events and spaces reflects the fact that the structure of urban environments can only be comprehended by thoroughly examining the everyday spatial practices that occur within them. This chapter discusses urban informality as the spatial tactics employed by members of society as urban actors. These tactics are demonstrated through spatial actions and spatial arrangements that maneuver beyond the formal structure of the built environment in which everyday life occurs. This chapter presents the case of a communal event held in an urban neighborhood in Indonesia that demonstrates layers of spatial connectivity produced by informal acts during socio-cultural events. The emerging layers of informality overlap with the formal layers of urban space to produce layers of spatial connectivity that form the essence of spatial informality. These layers demonstrate society's creative and responsive acts in various ways—maneuvering within the predefined urban spatial structure, manifestation through connectivity of activities, connectivity of inside-outside spaces, and connectivity established by time. While the layers are not fully independent of the predefined structure, they demonstrate the robustness of collective tactics regarding the utilization of spatial and temporal resources. Understanding these layers of connectivity is critical to reorienting urban design in such a way as to acknowledge the emergence of alternative layers beyond the formal urban structure.

Keywords Collective · Layers · Spatial connectivity · Spatial tactics · Urban neighborhood

Discourses on urban informality are becoming increasingly important as cities become increasingly complex and diverse. The making of the urban environment is no longer the exclusive domain of planners and designers.[1] Indeed, the role of

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urban actors becomes more critical as the processes associated with the urban built environment become more inclusive, engaging, and participatory. Contemporary cities emerge as the result of the complex relationships, events, and actions of their inhabitants. Understanding the urban environment entails considering various aspects beyond the formal, physical urban structure. Moreover, it necessitates paying more attention to the informal processes that shape cities.

Informality has been discussed as one of the defining characteristics of cities in the Global South. It generally manifests in forms of the built environment that "emerge outside the formal codes of the state in terms of land tenure, urban planning, design, and construction."[2] Prior investigations of informality in the field of urban studies have been dominated by a macro perspective on the urban environment. Such studies have mainly addressed aspects of regulation that define the status of informality within cities,[3] performed urban macro analyses to illustrate the distinction between formal and informal urban settlements,[4] or positioned informality as a challenge to formal urban planning.[5] Urban informality has also been considered as a site of critical analysis in which various social, economic, and political forces come into play.[6]

This chapter examines urban informality in the context of Indonesia through the everyday spatial practices of urban actors and adopts an alternative perspective on urban informality. It views informality as spatial tactics employed by urban actors, rather than referring to the built environment's formal status. Here, informality is understood as the emerging possibility of those spatial actions and spatial arrangements to maneuver beyond the formal structure of the built environment.

While the idea of urban informality is often discussed at the macro level of planning, there is another form of spatial informality that refers to "the use of urban space for functions that it is not officially designated for."[7] Examples of this form of spatial informality can be seen in various urban settings and is carried out by various actors, including the use of median spaces for picnicking,[8] the use of urban places for adolescents to hang out,[9] the emergence of street vendors in urban public places,[10] and the use of urban outdoor spaces for various programs that are normally conducted inside.[11] These examples demonstrate various ways in which urban actors maneuver among accessible spaces in cities. The notion of spatial informality addresses the negotiation between the planned urban environment and the reality of the urban environment, which is conducted through spatial tactics employed by urban actors.[12]

Our investigation of urban informality is grounded in an understanding that the urban environment plays a critical role as the spatial setting for everyday life. Informality emerges as a form of resistance to existing urban plans that do not always align with the reality of the everyday living space. Everyday spatial practices are performed by urban actors through various forms of operations.[13] These operations represent the manifestation of the actors' tactics in terms of maneuvering within their spatial situation—often imposed by external forces such as planning and regulations. "The space of the tactic is the space of the other. Thus, it must play on and with a terrain imposed on it and organized by the law of a foreign power."[14]

Urban informality emerges in settings that are "interstitial"[15] or that possess the character of "loose spaces."[16] It demonstrates the strategic responses of society based

on the potentials afforded by the formal physical structures within the urban environment. These potentials allow physical structures to be transformed through spatial uses and practices that are beyond the scope of normative planning. The presence of formal physical structures has largely become the primary focus of design intervention in urban design practice. Elements such as physical paths (streets, pathways, alleys), physically bounded areas (parcels, lots, districts), and various physical entities that suggest the clear demarcation of territory (borders, fence, edges, sidewalks) together define the physical structures of the urban environment in which everyday activities occur. However, when discussing the urban environment from the perspective of the everyday, it is necessary to examine the spatial stories of society that unfold beyond the formal structure of urban space.

The urban environment can be seen as the container of urban spatial practices,[17] where multiple actors take part in various stories that contribute to the unique identities of cities. Through stories that represent everyday tactics, it is possible to comprehend the reality of urban living. Within the common typologies of urban structures—both formal and functional typologies—everyday life may reveal distinctive forms of spatial practices through the unique characters of events, living practices, and relationships among actors. While the formal structure might be the same, the stories within the layers could differ from one setting to another. The search for the identity and character of urban life requires an understanding of those aspects that may distinguish a particular urban life. Many urban settings are characterized by their peculiar characters and specific forms of spatial practice. This diversity results in a unique identity, rather than demonstrating a generic form of modern urban life that creates uniformity and monotony.[18] It is through these stories that we can comprehend the particular spatial practice of an urban environment, as well as the particular meanings attached to lived environments by their users.[19]

Layers of Informality in Urban Everyday Space

Various studies have sought to examine spatial practices in urban environments beyond formal structures. Several techniques allow the reading of what lies behind the formal structure; mapping processes can reveal the hidden potentials of urban environments.[20] Investigating peculiar elements of a neighborhood can reveal the multi-layered stories embedded within everyday living. Simple elements tell interesting stories in various layers, each indicating the unique aspects of the living, the patterns of everyday life, and various forms of interactions between people, events, and environments.[21] The stories of urban environments are present in various layers; they demonstrate the interrelationships between the general and particular operations within the space.[22] It is within those layers that spatial tactics of society are established as a form of urban informality, rather than within the physical entities that form the formal structure of the urban environment.

When seeking to understand latent layers within the urban environment, it is important to consider connectivity as a key element that defines how spatial layers

are established beyond the formal urban structure. Urban informality contains urban actors' tactics in terms of maneuvering within the spatial resources available to them. Very often, such tactics can only work by dealing with the constraints imposed by the formal structure and transforming them into opportunities.[23] An interesting aspect of tactics concerns the fact that they often work by maneuvering between existing constraints. For example, tactics are established by looking beyond the functional label of the environment as well as beyond the boundaries prescribed by physical entities. Tactics emerge regardless of the functional typology of built spaces and elements; they avoid the constraints imposed by the presence of defined spaces, rigid borders, and clear spatial demarcations.

To reveal the spatial tactics within urban informality, we need to read the layers of everyday spatial practices beyond the formal physical elements. It is necessary to shift the focus away from physical things or other tangible phenomena (observed actions and events) and toward how such things connect to one another. We believe that a focus on connectivity allows for alternative approaches to seeing the urban environment. This approach represents a strategic point of departure in relation to understanding urban informality.

Emerging Layers of Spatial Connectivity in an Urban Neighborhood

The establishment of spatial layers of connectivity can be observed in many urban settlements, especially when there are close social ties among residents. Everyday life is full of negotiations in terms of using and managing the spatial resources available within a neighborhood. The following description illustrates how layers of connectivity overlap with layers of formal spatial structures within an urban neighborhood, especially during a special community event.

The investigated context was an urban neighborhood in Depok, West Java. It is a formal housing neighborhood; however, various spatial practices on the part of the actors (residents) indicate some degree of informality regarding the programmatic uses of neighborhood spaces. The neighborhood consists of a narrow street with rows of houses on both sides. Each house is bordered by a fence that demarcates the territory of the individual house; there is a narrow space separating each lot from the street (as the public pathway). In the everyday life of the neighborhood, the street plays an important role as the space in which neighbors interact with one another, thereby creating its social life (Fig. 31.1).

Every year on August 17th, a celebration is held in the neighborhood to mark Indonesian Independence Day. It is customary in many neighborhoods throughout Indonesia to celebrate the event as a form of thanksgiving for the nation's independence. People celebrate this special day through a series of community activities and events held over several days leading up to August 17th. The most important events are the competitions and games for various community groups, as well as the

Fig. 31.1. Street as the center of neighborhood social activities. *Photo* Yandi Andri Yatmo, Paramita Atmodiwirjo

communal celebration night known as *tasyakuran* ("thanksgiving"). These events involve the whole community and, therefore, require spaces that can accommodate a large number of people.

As the neighborhood space consists of only a narrow alley and houses, there is limited space for public gatherings. The community has established a habitual routine of utilizing available spaces within the neighborhood as shared spaces for this special occasion. The community's agreement in relation to the use of the street and houses for this special communal celebration demonstrates how the formal structure of the urban environment can be transformed through various spatial actions that suggest informality tactics. Such a transformation results in the emergence of layers that indicate how informality tactics are practiced by the residents of the neighborhood.

Appropriation of the Formal Spatial Structure

At least three layers emerge within the process of transforming the formal spatial structure as a means of managing the spatial resources available to the community. The first layer is the existing layer of the spatial structure that is present as the physical entities of the urban spatial elements. It indicates the presence of space as

the spatial structure consisting of the path, enclosed spaces, borders, or periphery. The path is the narrow street or alleyway that forms the public shared space of the neighborhood. The enclosed spaces are the spaces of the individual houses that form the private living spaces along the path. Between the path and enclosed spaces are the physical elements that serve as the border or periphery. These elements can exist in various forms of physical boundaries such as fences, walls, sidewalks, gutters, and terraces. The first layer is basically the formal structure of an urban environment composed of physical entities. These elements are visible, and they typically appear as the result of formal planning practices in the urban environment.

The second layer is established when the spaces that comprise the formal physical structure become the containers of events due to occupation and appropriation. In everyday life of this neighborhood, the second layer of occupation and appropriation can be observed as the habitual use of the spaces: the use of the neighborhood street as the main connector where people walk, pass by, and interact with one another; the use of enclosed space as the setting for private family activities; and the use of border and periphery elements as the transitional domain between the public path and the private enclosed space. More elaborate forms of occupation and appropriation can be observed during Independence Day celebrations held by the neighborhood community. The transformation of these spaces during a series of events connected with that celebration indicates the programmatic tactics employed to manage the spatial resources available for collective purposes (Fig. 31.2).

Most activities related to this special occasion are centered on the house of a community leader located in the middle of the neighborhood. The owner of the house is the former head of the neighborhood (or community leader), and despite having been replaced in that role, he is still considered to be a highly respected member of the community. His house has continued to be the main point of gathering for the whole community. During the Independence Day celebration, the spaces in front of his house become the main locations for the related events. Aside from this central location, other houses in the neighborhood become the locations of various activities supporting the main events.

The series of celebratory events usually begins with residents occupying the street around the community leader's house for competitions and games. Over the course of several hours, public access to the street is blocked and residents transform it into the setting for competitions and games. They bring out tables for cooking competitions, set out equipment for games and sports such as chess and table tennis, create racing tracks, and hang props for children's games. The whole community takes part in these competitions and games, either as participants or merely spectators. The community leader's house becomes the central area for organizing the events. On such days, his house is no longer entirely an enclosed space forming the private domain of his family, as some of its areas become shared spaces for the neighborhood. In particular, the living room and the front terrace become the central activity area for communal events.

The transformation of the private enclosed space of the community leader's house into a shared neighborhood space also occurs in relation to some other houses. These spaces become the settings for certain preparatory activities for the celebration. Some

The whole street is closed an hour before and during the Tasyakuran event

H-0 X

H-1   The street is opened again for a short period

H-4

X   The street is temporarily closed during competitions and games

H-10

H-12   The whole street can still be accessed during the pre-event period

THE EVENT SITUATION

PRE-EVENT SITUATION

Mr. W's kitchen as temporary communal kitchen for meal preparation

H-12

D-1   Dance practice in Mrs. S and Mrs. Y's front terrace

D-1   Storing tools and equipments in Mr. J's house

✚ A connection is formed as the private enclosed spaces were turned into shared neighbourhood spaces

✚ The physical features provide the necessary spaces for the celebration night event

D-1   Gift wrapping in Mr. A's living room

Various fence heights

Covered gutter as extended street space

Street area between two street lights with closed gutter in front of Mr. W's house

Street light

spaces used for the pre-event activities

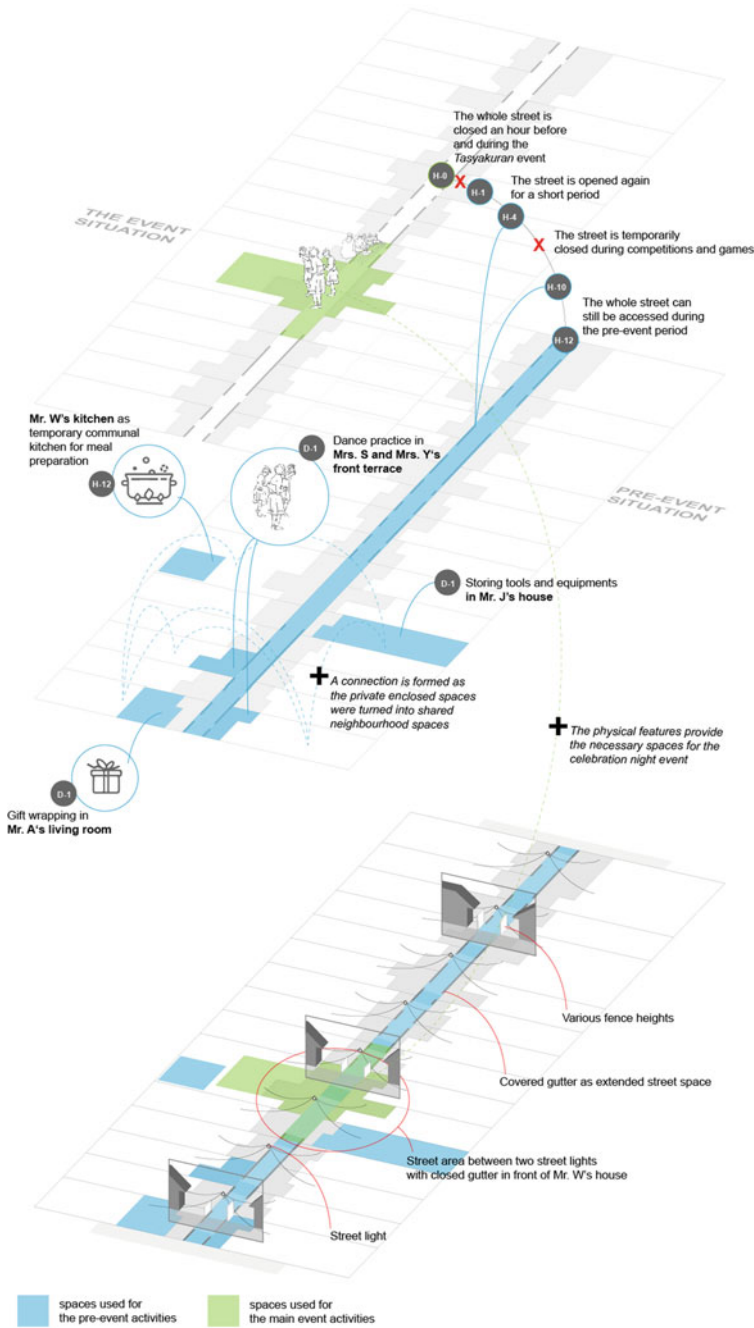spaces used for the main event activities

Fig. 31.2. Spatial appropriation of formal physical structure. *Drawing* Yandi Andri Yatmo, Paramita Atmodiwirjo

houses are used as locations for activities such as children's dance practice, wrapping gifts for competition winners, and cooking for the celebratory dinner. In both the community leader's house and other houses, the activities take place in the living room or on the front terrace. These activities temporarily blur the private boundaries of the houses.

The highlight of the event is the *tasyakuran* night celebration attended by the entire neighborhood. As with the competitions, the celebration night also takes place on the neighborhood street, albeit with completely different arrangements. A few hours before the celebration night, the street is once again closed to public passersby, and preparations for the celebration begin. Mats are arranged in the middle section of the street in front of the community leader's house. This is where the audience will sit while the stage and sound system are set up in front of the community leader's house. Meals are prepared in one of the other houses; children get dressed for their performance in the houses in which they usually attend dance practice. After dusk, preparation activities distributed in various houses begin to move to the central area of the celebration. The celebration lasts throughout the evening, involving speeches by members of the community, various dance and band performances, and communal dining, followed by informal talks.

The practice of urban informality tactics can be observed to occur within the above-mentioned two layers of the formal physical structure and the occupation or appropriation of the neighborhood. However, the way in which informality tactics work can only be understood through the third layer, which we define as the layer of spatial connectivity. In seeking to understand informality tactics, we argue the importance of considering the space in terms of connectivity. We suggest that the way the spaces are physically organized or arranged is less important than the way the spaces are connected. In fact, we argue that in terms of urban informality, connectivity represents the essence of space, as it is through such connectivity that both the character and performance of space are established (Fig. 31.3).

Spatial Connectivity as the Key Tactics of Informality

Further investigation of the layers of spatial connectivity within the transformation of the neighborhood space for community events indicates that there are at least three forms of connectivity. The first form is the connectivity of activities based on the roles of actors. Communal activities and the locations where they are performed cannot be separated from the particular actors that play an important role in the everyday life of the neighborhood. Events related to the Independence Day celebration could be considered a series of activities that move between the centralized celebration space and the dispersed locations of individual houses along the neighborhood street. All houses that serve as settings for activities, both centralized and dispersed spaces, belong to key members of the community. For instance, the central area belongs to the former head of the community, while gift-wrapping activities take place in
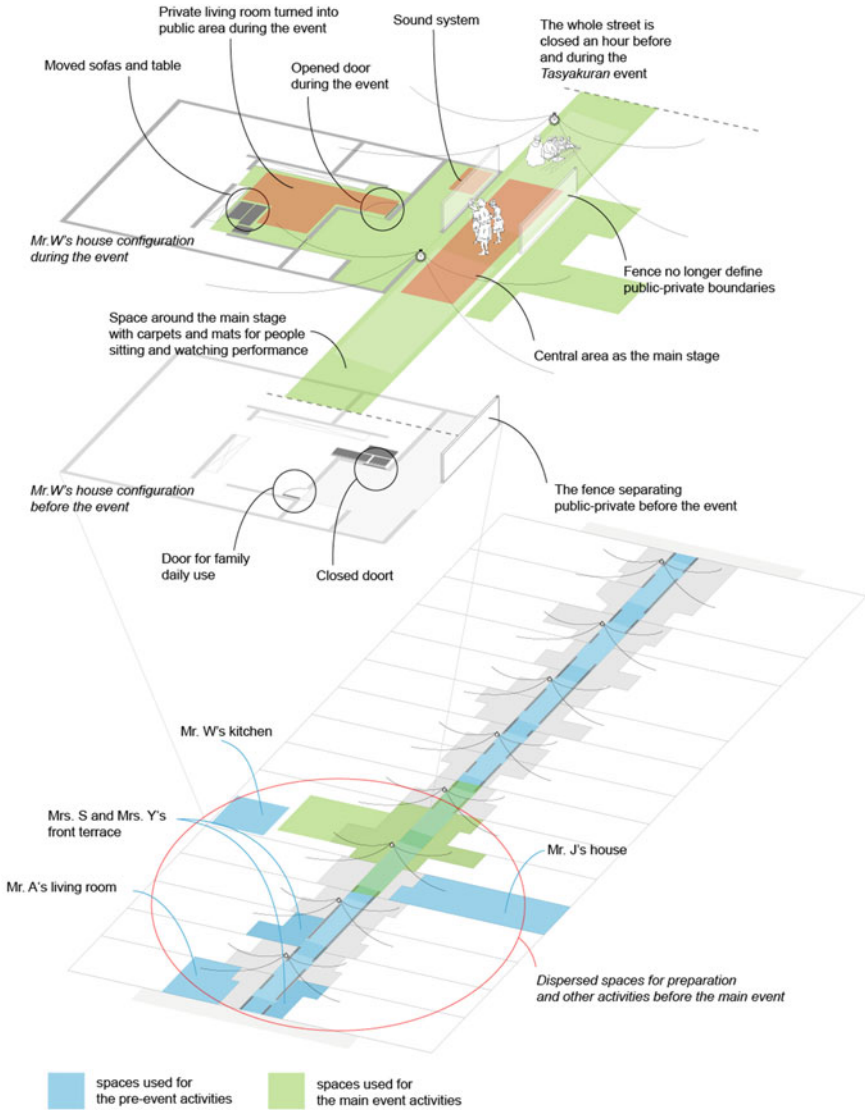
Private living room turned into public area during the event

Moved sofas and table

Sound system

Opened door during the event

The whole street is closed an hour before and during the Tasyakuran event

Mr.W's house configuration during the event

Fence no longer define public-private boundaries

Space around the main stage with carpets and mats for people sitting and watching performance

Central area as the main stage

Mr.W's house configuration before the event

The fence separating public-private before the event

Door for family daily use

Closed doort

Mr. W's kitchen

Mrs. S and Mrs. Y's front terrace

Mr. J's house

Mr. A's living room

Dispersed spaces for preparation and other activities before the main event

spaces used for the pre-event activities

spaces used for the main event activities

Fig. 31.3. Transformation of neighborhood space for special community events. *Drawing* Yandi Andri Yatmo, Paramita Atmodiwirjo

the community secretary's house. Meanwhile, the dance practice and meal preparation are led by key female members of the community. Over the years, particular houses have been agreed upon as the settings for celebrations and preparations on an annual basis. Everyone knows where certain activities will be conducted during both preparation and main events.

The second form is the connectivity of inside-outside spaces. Physically, the path serves as the outside space, having the character of being open and public. Meanwhile, each individual house serves as the inside space, having the character of being enclosed and private. However, during the transformation of the neighborhood space into the special celebration space, some parts of the private houses are transformed into shared spaces that complement the street space as the central area of the celebration.

During the night of the celebration, the areas around the celebration spot transform into communal shared space. The boundaries between the street and the individual enclosed spaces of the houses become blurred. People and their activities occupy not only the street dedicated to the event but also the peripheries of the houses where, for example, they might lean on a wall to watch the performance while conversing with one another. The houses around the central area become the extended space for celebration; the physical boundaries enclosing the spaces of the individual houses no longer perform their intended roles as the borders of the houses' territories. There is a particular degree of how much the collective outside activity is extended into the inside spaces. Both the border and periphery play important roles in defining the extendibility of the spaces.

The third and perhaps most important form is the connectivity established by time as the key aspect of everyday practice. The role of time cannot be overlooked when seeking to understand the spatial layers that form tactics of urban informality:

> …because it does not have a place, a tactic depends on time—it is always on the watch for opportunities that must be seized on the wing. Whatever it wins, it does not keep. It must constantly manipulate events in order to turn them into opportunities.[24]

In this context, time becomes the prerequisite for managing spatial resources during the preparation and the main celebratory events. The role of time is also demonstrated by the movement of actions and objects from one part of the neighborhood to another so as to allow for spatial appropriation. For example, there is a certain period of time when it is necessary to block the street to allow sufficient time to prepare for the celebration. Time also plays a critical role in defining when actions should move from the dispersed spaces to the centralized space when the celebration begins. Movement occurs on the part of various objects during the transformation. These include the chairs and mats collected from individual houses, the sound system taken from inside the community leader's house and set up on the stage, and the cooking equipment brought from individual houses to the collective meal preparation area. As the celebration is an annual habitual event for the community, community members have agreed on which spaces to use during particular time sequences. For example, when the children are ready for their performance, when the meals are ready to be served, and when the formal ceremony is about to begin.

Overlapping Layers as Informality Tactics

It is important to note that the occupation and appropriation of the formal spatial structures by community activities are made possible by the nature of physical entities. In relation to the different natures of the formal spatial structures, different methods of transformation may apply. The appropriation of the street for various events is made possible due to its nature as the connector of different parts of the neighborhood, while at the same time, it serves as an open space that temporally shifts its function; it is treated as a shared and collective space. The tactic is performed through a time-based transformation as the method for transforming the path into the setting of collective activities—from a space for passing by to the setting for various actions. Temporality is the key aspect that determines when the street can be closed to the public and when it becomes a shared event space.

The appropriation of the enclosed spaces of individual houses is related to the different natures of those spaces. For instance, the kitchen serves as the functional space for collective meal preparation by female members of the community, while the living room and front terrace—which fulfill a looser function—serve as the setting for dance practice, since the furniture can be easily moved to provide space for the practice. Here, the tactic involves opening up the enclosed space, which is mostly interior space, to more (albeit still selected) users, who then collectively utilize the functional space inside the house for a certain period of time. Such tactics make use of the existing functional program within the existing structure and exploit it as an opportunity for a collective purpose.

The border or periphery between the street and houses has the character of a threshold space. It generally serves as the transition between the outside and inside, which in everyday routine becomes the transition between the public and private domains. However, when the enclosed spaces are appropriated for collective uses, the physical characteristics of the border or periphery are no longer relevant. During the celebratory events, the border and periphery become part of the extended space, achieved through the tactic of blurring physical boundaries through actions and temporal occupation.

All three tactics demonstrate the critical role played by time in establishing informality strategies through managing spatial resources during particular periods of time as agreed by the community. This study of a community's appropriation of neighborhood space demonstrates how time arranges the spaces of the neighborhood into different layers. Time becomes the determinant of when to fill the spaces and when they are open for appropriation, either being open by default or being made open through a collective agreement.

This study reflects the different ways in which urban informality tactics and layers of connectivity interact with the formal spatial structure of the neighborhood. It indicates the critical role played by time in defining how layers of informality overlap with the formal layers of urban space in the everyday practices of the neighborhood. It is evident that the layers of connectivity do not emerge independently from the predefined formal physical structure of the neighborhood. Instead, they demonstrate

the robustness of collective tactics employed by the community in relation to the use of available spaces. This understanding of the layers of connectivity suggests a need for urban design practice to acknowledge the emergence of alternative layers beyond the formal urban structure.

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Chapter 32
Carnival Nonmovements and the Repoliticization of Urban Space in Yazd, Iran

Vahid Vahdat

Abstract While public spaces within the historic urban fabric of Yazd, Iran, have for centuries functioned as a venue for the Muharram mourning rituals, modern urban spaces in the newer parts of the city have in the past few decades hosted an unprecedented form of collective gathering. Unlike mourning ceremonies, these are festive, spontaneous, amorphous, and lack organization. Such events, that for example, include gatherings in celebration of sport achievements, can be categorized as what Asef Bayat refers to as nonmovements—a form of everyday resistance without recognizable leadership, organization, or ideology. This study builds upon an earlier quantitative study conducted on the participation of the residents of Yazd, Iran. I articulate the result of the survey and ethnographic findings to suggest that urban settings can become a site for the ordinary actors of nonmovement to find their collective agency and channel their shared grievances into an organized/politicized force for change. By deifying the sociopolitical order of the state, the urban subaltern creates a space in which political sovereignty of the state seems revoked, its moral authority is suspended, and differences in class, gender, race are momentarily withdrawn. Such events thus qualify as Bakhtinian Carnivals where the "official seriousness which is dogmatic and hostile to […] change" loses its symbolic authority. This study looks back on interviews with participants in carnival nonmovements occurring in the streets of Yazd that were conducted more than a decade ago. I conclude by showing how the public quality of streets allows the civic society to reclaim its right to the city through incremental but pervasive acts of carnival resistance. This carnival experience eventually enables the urban grassroots to mobilize by linking their noncollective struggles to broader sociopolitical demands.

Keywords Nonmovement · Carnival · Urban space · Right to the city · Iran

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What is life when happiness is illegal?

What is salvation when fun is a sin?

Where does one seek privacy when all is monitored?

I asked these questions back in August 2018, when my friend Amir Jalali, a talented and ambitious director, asked me to craft a statement for his new film, *Residents of the Last Floor*. The film chronicles the unexpected interaction of four characters who meet on the rooftop of an apartment complex in Yazd, Iran, in a 26-minute *plan-séquence*. Based on the director's personal experience, the film narrates the encounter of two main characters, a young boy and a girl attending a party that involves dancing and alcohol—both of which are illegal and punishable in Iran, even when practiced within the private confines of one's own residence. Hearing the sirens of the "guidance patrol," who are about to storm the apartment, the two, who have not met during the party, run into one another on the building's rooftop, when trying to find a hideout and flee arrest and prosecution. There, they also meet the two other similarly frightened characters—a working-class satellite dish repairman working on the installation of a receiver for a middle-aged conservative woman from the same apartment complex, who happens to be a respected high school principal. As absurd as it sounds, satellite equipment in Iran is banned. The Iranian police regularly raid residential buildings to confiscate dishes and punish those who own, distribute, use, or repair them.[1]

In the statement, I wrote, "people whose everyday attempts for joy are criminalized, always feel as outlaws and therefore share a resentment towards law and distrust in one another. Here in Iran […] everyone is trained early in their lives to wear a mask in public and lead a double life."[2] While these lines, uncharacteristic of academic writing, follow the sentimentality of the film's attempt to capture the sociopolitical complexities of civic life in Iran, through the metaphoric reductionism of an apartment complex, they end with an important question: While Yazd is globally recognized for its glorious urbanism, celebrated townscapes, and historic architecture, are the everyday social struggles, situated within its modern spatial order, unworthy of filmic (or for this matter, scholarly) speculation?

This chapter revisits the same question through the lens of urban informality. It looks at the informal quality of modern public spaces and their potential to become "heterotopic" sites for spontaneous "amorphous behaviors" through which citizens exercise their "right to the city." And through moments of such "carnivalesque" suspension of formality, order, and authority, the "nonmovement" becomes impregnated with political agency—one that gradually finds form in "street politics." While these lines lay out the road map to the chapter's central argument, following its logic requires decoding the jargon that awaits semantic freedom from the ambiguity of quotation marks.

Spatial-Carnivalesque Agency

Located at the center of the Persian Plateau, Yazd is not only celebrated for its rich adobe architecture, but also for introducing a historic urban typology, known as *tekyeh.* While historians of urban form have noted the scarcity of well-designed, high-quality urban spaces in the pre-modern architecture of Iran,[3] *tekyeh*s have been praised as "the most significant examples of public space in Persian history."[4] With their distinctive stepped morphology, these urban plazas are often accentuated with double minarets.[5] Apart from hosting everyday urban activities, *tekyeh*s function as a venue for the collective act of grief expression, known as *azadari* of Muharram.[6]

These ritualistic activities, especially *sineh-zani* (rhythmically beating the chest in tandem with recited elegies), which are common in Yazd, have been a subject of my previous investigations.[7] There, I emphasized how the clear distinction between performer and viewer is spatially manifested in the larger open space (often covered by a tensile fabric structure known as *push*), which serves as a stage for the procession and the surrounding multiple stories of *soffeh*s, where the audience gets the best views of the performance.[8] I have been particularly fascinated by the well-established forms of these activities that apply to all aspects of the event—everything from sartorial details of the procession members to the musical tempo of eulogies—are meticulously predefined and observed, not only by the performers but also by the audience (Fig. 32.1). The details of these collective performances are so highly

Fig. 32.1. A sineh-zani procession in the Shah Abolqasem Tekyeh in Yazd, Iran. *Photo* Javad Raghebian

engineered that the geometric and calculated movements of *sineh-zani* qualify it as an example of the mechanical aesthetics of "mass ornament."[9]

In contrast with the absolute formality of mourning rituals, over the past few decades, a new form of social behavior has been emerging in public spaces in Iran (including in Yazd), which I refer to as carnival gatherings. These highly informal, spontaneous gatherings that often occur in response to public stimuli, such as an important football match, are typically amorphous acts of collective relief. Unlike the specificity of theatrical gathering during mourning rituals, which have been institutionalized through centuries of collective rehearsal, carnival gatherings often lack defined behavioral forms, codes, or norms. This collective eruption of emotions may lead to activities that range from dancing, singing, and fireworks to the joyous silliness of spray can flamethrowers, or driving along the crowd with loud music while passengers are stretching out of car windows and waving flags.

> "A group of bikers had blocked the street," says one of the people I interviewed, "and the police couldn't care less. It was incredible." Another interviewee mentions seeing a young man in an event who was hanging on to the back of a driving vehicle, while standing on a tin sheet, thereby producing a spectacle of friction sparks. Another talks about "a group of six seven younger kids, who stopped an older couple's sedan and then started moving it up and down, it was crazy."[10]

A healthy dose of crazy is indeed part of the attraction of carnival gatherings—it attracts a crowd, which becomes a source of curiosity for more crowds to join. The audience is at the same time a performer, thus blurring the actor/viewer border in an ever-shifting dynamic between participation and observation. "It is as if the whole event is a space where urban *flâneur*s become aware of their collective self."[11]

Informal Resistance

Linked to their spontaneous nature, carnival gatherings resist reductionist categorizations and evade *a priori* meta-narratives; observation and codification of micro-patterns of their social/behavioral components seemed to lead to a more nuanced understanding of their complexities. This became the premise of the research I conducted for my graduate thesis in urban design, back in 2006.[12] I studied these behaviors through a combination of naturalistic methods of inquiry—interviews, ethnographic fieldwork, participant observation, and quantitative methods—that included a survey with a sample population of 380 residents of Yazd. The outcomes have been published in Persian in *Iran Nameh*.[13]

I will not repeat the result of that study here, which, for example, discusses the demography of participants (gender, marital status, education level, occupation, income level), their choice of companion, mode of transportation, and specifics about their conduct during carnival gatherings. For this chapter, I shall rather address the topic through a theoretical re-articulation that associates carnival gatherings with political movements, such as the 2009 Green Movement, which was arguably the predecessor to the Arab Spring.[14] To make this connection, I borrow Asef Bayat's

concept of "nonmovement," as a theoretical framework to revisit carnival gatherings. Nonmovements, according to Bayat,

> …are the collective endeavors of millions of noncollective actors, carried out in the main squares, backstreets, courthouses, or communities […] they embody shared practices of large numbers of ordinary people whose fragmented but similar activities trigger much social change, even though these practices are rarely guided by an ideology or recognizable leadership and organizations.[15]

Through a strategy that Bayat calls the "quiet encroachment of the ordinary," the urban subaltern, excluded from the political stage of Iran's autocratic regime, finds spaces to voice their dissent simply by asserting their presence, practicing their everyday lives, and refusing to abandon their norms. Certain urban spaces thereby find the capacity to serve as a site that activates the agency of ordinary people—the urban dispossessed, rural migrants, marginalized identities, women, and youth—in their quest for change. Actions that may appear as detached, dispersed, and fragmented attempts by atomized individuals in affirming their right to the city—reclaiming the streets, appropriating public space, and infringing on urban infrastructure— become part of a steady and strenuous collective campaign to contest the political and economic order.[16]

The fact that carnival gatherings qualify as nonmovements is supported by data from my previous surveys. The lack of any meaningful correlation between the participants and their socioeconomic status (or education level) confirms that carnival gatherings are not exclusive to a certain class.[17] The perception of spontaneity of gathering times confirms their lack of top-down organization (Fig. 32.2). But despite the non-ideological/nonmovement nature of carnival gatherings, a common understanding exists (at least among those who distance themselves from such events) that carnival gatherings are transgressive.[18] Interestingly, 58% of this population claimed that they would participate only if the event was formally organized. On the other hand, 43% of participants in carnival gatherings say they would not attend such an event. Clearly, both groups agree that informality is the central essence of such gatherings.

This informality that public spaces afford plays a key role in transforming carnival gatherings to potential self-conscious social movements. After all, Bayat argues that nonmovements and "the urban grassroots are unlikely to become a more effective player in a larger sense unless they become mobilized on a collective basis, and their struggles are linked to broader social movements and civil society organizations."[19] It is in the street where strangers recognize one another's shared sentiments and "urban *flâneur*s become aware of their collective self"—and thus take part in the "spatial encroachment of the ordinary."[20]

Spatial Encroachments

The Bakhtinian carnival helps articulate the triggers that transform incremental but pervasive acts of everyday resistance into organized political movements with clear

Fig. 32.2. Police car surrounded by people who are celebrating Iranian national soccer team's win over Morocco in the 2018 World Cup. *Photo* Mohammad Reza Alimadadi

ideological agendas. Carnival, as Bakhtin defines in *Rabelais and his World*, is a type of communal performance centered around festivity.[21] The joyous component of carnival occurs at the material/bodily level in an excessive and grotesque manner—a de-transcendence of the world wherein everything seems permitted. The performer/audience boundaries in carnival are disrupted, thus inviting all groups of society to get involved in the festivities. My naming of carnival gatherings in Iran is precisely because of their performative, festive, and hedonistic qualities.

But more so because carnivals function as alternative social spaces that flatten all fixed hierarchies and create a utopian space of equality—one that momentarily abolishes social status and economic class and replaces them with pure human relations. The brief moment of release from official ideologies and dominant norms empowers the participants to revoke the authoritarian order. When the "official seriousness which is dogmatic and hostile to […] change" loses its symbolic authority, exclusions are restored, and differences are withdrawn.[22]

The elimination of barriers is not just symbolic, imagined, or socially constructed but experienced; therefore, the replaced feeling of freedom is as real and intense. This shared experience of freedom, unity, and equality grows into a perpetually regenerative collective that enacts a particular utopian vision—one that emerges from a lived, bodily experience, not an abstract state of mind. According to Michel Foucault in *Of Other Spaces,* heterotopias contrast to utopias which are "fundamentally unreal spaces,"

…[t]here are also, probably in every culture, in every civilization, real places—places that do exist and that are formed in the very founding of society—which are something like counter-sites, a kind of effectively enacted utopia in which the real sites, all the other real sites that can be found within the culture, are simultaneously represented, contested, and inverted.[23]

While Foucault refers to these spaces as heterotopias, one kind is of particular interest to this chapter: the heterotopia of the festival.[24] To expand on Foucault's definition, the heterotopia of the festival is transitory and bodily. Its formation requires the merging of real places with multiple (often incompatible) social spaces. They function at full capacity when participants actively break with dominant norms and ideologies. Carnival gatherings are heterotopic precisely because of these qualities. More importantly, they manifest a collective utopian aspiration at the basic level of defiance from the norms and resistance to formalities.

Public spaces under the controlling hegemony of an autocratic state have been unable to fulfill their potential as a manifestation of the civic society, momentarily granting participants their "right to the city." While my prior surveys showed the irrelevance of spatial qualities in attracting carnival gatherings,[25] it confirmed that crowded spaces were the main criteria attracting carnival participants.[26] Crowded spaces offer a more diverse range of activities to view, allowing participants to remain invisible as individuals, but paradoxically giving them more visibility as a new collective (Fig. 32.3). As a claim-making practice, carnival gatherings thus

Fig. 32.3. Vehicular traffic is disrupted at Tajrish Square, Tehran, Iran, as crowds gather in October 2013 to celebrate Iran's national soccer team qualifying for the 2014 World Cup. *Photo* Behnam Aqazadeh

begin with reclaiming modern public space through a persistent presence that defies authority, order, and surveillance. The neutrality and informality of modern streets permit a casual defiance of separation, delimitation, and restriction imposed in the name of manageability, security, and order.

Conclusion

The comical encounter of the four characters of *Residents of the Last Floor* on the unlikeliest of places shows how a neutral space that is open to public encroachment can become a site where different classes, generations, and ideologies meet. When a non-political act of communal joy within private space is monitored, regulated, and suppressed, the forgotten semi-public refuge of a rooftop inevitably becomes embedded with political agency—it enables the formation of an inclusive collective that recognizes its shared selfhood, grievances, and power.

If "our political task, [as] Lefebvre suggests, is to imagine and reconstitute a totally different kind of city out of the disgusting mess of a globalizing urbanizing capital run amok," then a starting point can be the informal festivities of carnival heterotopia, as it brings together different sectors of the society in a shared defiance of hegemonic sociopolitical order.[27] "The city," as David Harvey asserts, "has to be construed not as a right to that which already exists, but as a right to rebuild and re-construe the city as a socialist body politic in a completely different image."[28] If this alternative image should at the same time be utopian and real, if it needs to be a shared image among the larger societal body, if it ought to generate a collective identity that can organize based on a clear agenda, and if it relies on a sustained and persistent presence of its actors, then the festive craziness of a post-soccer-match eruption of joy should be taken seriously.

Endnotes

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3. "[Premodern] Iranian cities," as Mahmoud Tavassoli argues, "have never had squares as a form of public space." Mahmoud Tavassoli, *Tarrahi-Ye Faza-Ye Shahri (in Persian) [Design of Urban Space]*, vol. 1 (Tehran: Markaz-e motale'at va tahqiqat-e me'mari va shahrsazi-ye Iran, 1992), 43. Some go so far as to contend that public space is a modern construct in Iran and that premodern examples do not qualify as a spatial manifestation of the public sphere in its modern sense. Mohsen Habibi, *Az Shar Ta Shahr*, 4 ed. (Tehran: University of Tehran, 2003).

4. Mahmoud Tavassoli, *Qava'ed Va Me'yarha-Ye Tarrahi-Ye Faza-Ye Shahri (in Persian) [Principle of Designing Urban Space]* (Tehran: Markaz-e motale'at va tahqiqat-e shahrsazi va me'mari-ye Iran, 1997), 15.

5. Minarets are often added as vertical structural elements to deter the spreading and possible collapse of the wider *soffeh* arches. See for example the Amir-chakhmagh square in Yazd. For a full discussion of the morphological changes in the square, see Vahid Vahdat, "Geometric Reconstruction of Amir-Chakhmagh Square through Backward-Perspective," *Kybernetes* 40, no. 7/8 (2011).

6. In commemoration of the martyrdom of Imam Husain, the grandson of the Prophet Mohammad, Shi'ite Muslims around the world annually take part in a variety of mourning rituals, known as *azadari* of *Muharram.* For more information about *azadari* traditions see Jean Calmard, "ʿazādārī," in *Iranica*, ed. Ehsan Yarshater (London: Columbia University, 1987).

7. Vahid Vahdat and Stephen Caffey, "Sacred Adsorptions: Civic Sites for (Gendered) Public Mourning in Yazd, Iran," in *Interior Urbanism Theory Reader*, ed. Gregory Marinic. New York, NY: Routledge, 2023.

8. S*offeh*s are a series of elevated recessed areas surrounding larger open spaces such as schools, mosques, and *tekyeh*s.

9. Siegfried Kracauer and Thomas Y. Levin, *The Mass Ornament: Weimar Essays*. Cambridge, Mass: Harvard University Press, 1995.

10. Vahid Vahdat, "Carnival as Heterotopia: The Reinvention of Informal Spaces in Yazd [in Persian]," *Iran Nameh* 28, no. 4 (2013): 31.

11. Ibid.

12. "Samandehi-Ye Khiyaban-E Qiyam Ba Ta'kid Bar Raftarha-Ye Karnavali (in Persian) [Urban Renovation of Qiyam Street]" (University of Tehran, 2007).

13. "Carnival as Heterotopia."

14. The Green Movement refers to a massive political movement in Iran that started as a spontaneous mass demonstration in reaction to the 2009 Iranian presidential election and led to a series of political protests and civil disobediences that lasted from late June 2009 to mid-February 2010. Abbas Milani, "The Green Movement," The Iran Primer, https://iranprimer.usip.org/resource/green-movement; accessed December 21, 2020.

15. Asef Bayat, *Life as Politics: How Ordinary People Change the Middle East*, Second edition. ed. Stanford, California: Stanford University Press, 2013, 15.

16. For more information about the right to the city, see Henri Lefèbvre, *The Production of Space*, trans. Donald Nicholson-Smith. Malden, Mass: Blackwell Pub., 2011.

17. That said, the survey shows that those who distance themselves from carnival gatherings tend to have a larger proportion of married and female respondents and are slightly less educated. Vahdat, "Carnival as Heterotopia."

18. 51% of those who do not take part in carnival gatherings cite the transgressive nature of the event as their main reason. Ibid., 31.

19. Bayat, *Life as Politics*, 55.

20. Vahdat, "Carnival as Heterotopia."

21. Mikhail Mikhaĭlovich Bakhtin, *Rabelais and His World*, trans. Hélène Iswolsky, 1st Midland book ed. (Bloomington: Indiana University Press, 1984).

22. *Problems of Dostoevsky's Poetics*, trans. Wayne C. Booth. Manchester: Manchester University Press, 1984, 160.

23. Michel Foucault, "Of Other Spaces," *Diacritics-a Review of Contemporary Criticism* 16, no. 1, 1986.

24. "These heterotopias," according to Foucault, "are not oriented toward the eternal, they are rather absolutely temporal [chroniques]. Such, for example, are the fairgrounds, these' marvelous empty sites on the outskirts of cities that teem once or twice a year with stands, displays, heteroclite objects, wrestlers, snakewomen, fortune-tellers, and so forth." Ibid.

25. These spatial qualities included abundant greenery, seating areas, public amenities, low traffic, retail opportunities, proper lighting, largeness, etc. Vahdat, "Carnival as Heterotopia," 31.

26. Crowdedness was their first criteria for selecting a location for carnival events for more than two thirds of the sample population. Ibid., 27.

27. David Harvey, *Rebel Cities: From the Right to the City to the Urban Revolution.* New York: Verso, 2012, xvi.

28. Ibid., 138.

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Chapter 33
Pop-up Cities: Refugee Camps between Transience and Resilience

Rana Abudayyeh

Abstract In recent years, the world has experienced an unequivocal surge in refugee numbers. The current patterns of displacement are transgressing regional boundaries, simultaneously affecting local and global narratives. Such settings of shifting milieus challenge conventional notions of cities, reconfiguring their demographics, parameters, and implications. In some cases, massive exoduses have formed within months—entire cities have emerged—pop-up cities. This chapter examines the parameters and implications of refugee camp-cities within the contextual shifts that population displacement ensues. It speculates on design practices within a new urban dynamic where transience is a dominant modality. Refugee camps are cities that continuously negotiate complex politics of time and place; they subsist despite immense challenges. These makeshift cities stand as a testament to their populace's resilience, but more importantly, a paradigm to our transforming universal human condition that, despite earnest bids for permanence and stability, finds itself today amid a heightened state of transience. To better understand the dynamics of displacement, this chapter will specifically use the refugee setting in Jordan as a palpable illustration of the multifaceted realities of camps and their reciprocal relationships with neighboring and global cities. It uses Al Zaatari and Baqaa Refugee camp-cities as specific case studies.

Keywords Refugee camps · Resilience · Displacement · Social city · Translocality

Introduction

In her book, *The Economy of Cities*,[1] Jane Jacobs addresses the city as a reciprocal system that functions in settings defined by physical, economic, social, and political conditions.[2] Refugee camps can be understood as settings operating at the nexus of those parameters, rendering camps complex cities in their own right. This chapter presents refugee camp-cities in Jordan as a palpable illustration of the makeshift

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social city. It employs a multi-scalar analysis of the camps' spatial, societal, and economic parameters as a primary research method. Furthermore, it addresses the multifaceted realities of camps and their dynamic relationships with neighboring and global cities, focusing on Al Zaatari (Fig. 33.1) and Baqaa Refugee (Fig. 33.2) camp-cities as specific case studies.

Refugee camps have become a collective presence within the global narrative; they are cities that continuously negotiate complex politics of time and place and have often produced resilient patterns of urban development that subsist despite immense challenges. Understanding refugee camps as cities diversifies urban thinking and mobilizes new approaches to designing refugee settings that resist insular trajectories to camp management and long-term care. Additionally, it caters to interwoven logistical dependencies between citizens and refugees. The symbiotic intricacies between refugee camps and their host communities are central to understanding them as social cities. While shared values and a deep longing for regional peace and security unite what would otherwise be deep rifts and disjunctions between citizens and refugees, planning strategies and participatory design approaches mitigate the harsh political and physical environments. Together, these factors forge a refugee's transposed and layered belonging.

Fig. 33.1 Collage: Rana Abudayyeh (aerial view of Al Zaatari Refugee Camp, Jordan. *Source* L. Google Maps R. Daily life in Zaatari Refugee Camp in Jordan, World Bank Photo Collection)
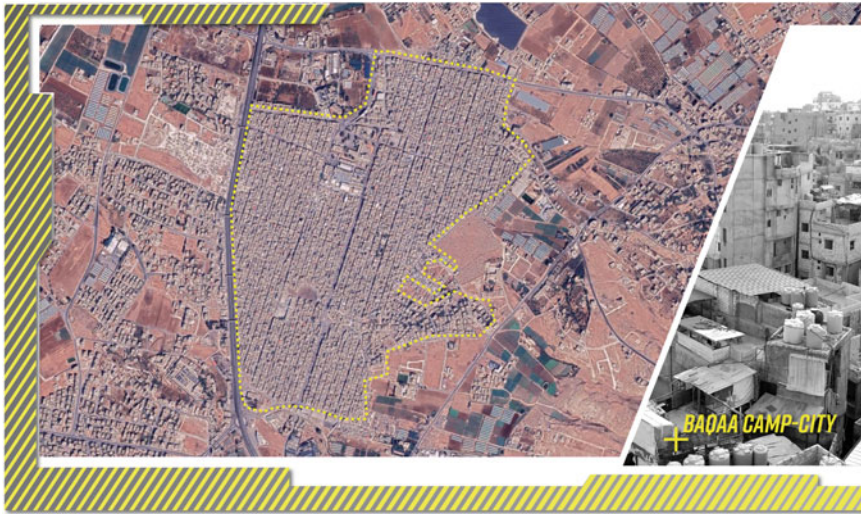
Fig. 33.2 Collage: Rana Abudayyeh (aerial view of Baqaa Refugee Camp, Jordan. *Source* L. Google Maps R. Baqaa Camp, Jordan, Roya News)

The Camp as a Social City

Migration is a fundamental part of the human transition to urban centers and a constant lifeline to cities worldwide.[3] Industrialization abetted people's flows into cities and gave rise to multiple flight to urban waves.[4] While the search for better opportunities and jobs played a role in urbanization, crises caused the largest patterns of people's movements to urban centers searching for safe and secure livelihoods.[5] Despite the normalcy of migration and its prevalence in industrialized societies, a refugee today barely qualifies for the most basic human standings. To associate this entirely with political and environmental conditions seems to thin out the reality of more systemic processes that have been at play for many years. These processes involve dispensational structures and economies that bargain on geographic locations. Traditional cities are the pinnacle of such practices. Sedentary entities, cities are the settings where national ties are formed, and identities are established. In contrast to traditional cities, refugee camps have often struggled to establish a clear presence; they remain precarious settings that can only be understood via their complex social structures.

Refugee camps are cities that do not subscribe to a single location (Fig. 33.3). They are social cities suspended between a place and a non-place. In his book, *Non-places:* Introduction to an Anthropology of Supermodernity, French anthropologist, Marc Augé, presents this juxtaposition, saying: "If a place can be defined as relational, historical and concerned with identity, then a space which cannot be defined as relational, or historical, or concerned with identity will be a non-place."[6] Within this definition, it is easy to associate the traditional metropolis with

Fig. 33.3 Collage: Rana Abudayyeh (Aleppo, Syria, in 2012, after the bombing left it in ruins; superimposed on a picture of a shelter unit being transported to Al Zaatari Camp, Jordan, around the same time period)

"place" and refugee camps with "non-place." However, neither entity subsists within one definition. Understanding refugee camps and conventional cities in light of the attributes and contradictions of both place and non-place is essential. Both the city and the refugee camp, as it turns out, need a robust interplay between transience and permanence to become resilient. This interplay results in distinct interdependencies between the city and the camp, and gives rise to a new typology of population nodes: camp-cities.

Camp-Cities, Networks for Collective Identity

In 2019, the world's forcibly displaced population reached 79.5 million[7] (Fig. 33.4). The majority of refugees are hosted in developing countries, which further strains economies and infrastructures that are already weak or non-existent.[8] Many of those displaced individuals never return to their countries of origin and must live in an ongoing condition of statelessness. Generally speaking, the dynamics of displacement are fluid, yet the state of displaced individuals has always been slow-moving. Rarely do refugee camps meet their projected duration. In many cases, protracted displacement occurs, giving rise to camp-cities. Temporal in their reading, yet possessing a demanding physicality, camp-cities are unique in their evolution. Entirely operable centers, they sustain generations of occupancy while navigating complex politics and multi-agent economics. Camp-cities are not vernacular constructs, nor planned developments. As Michel Agier describes in the book, *Native*
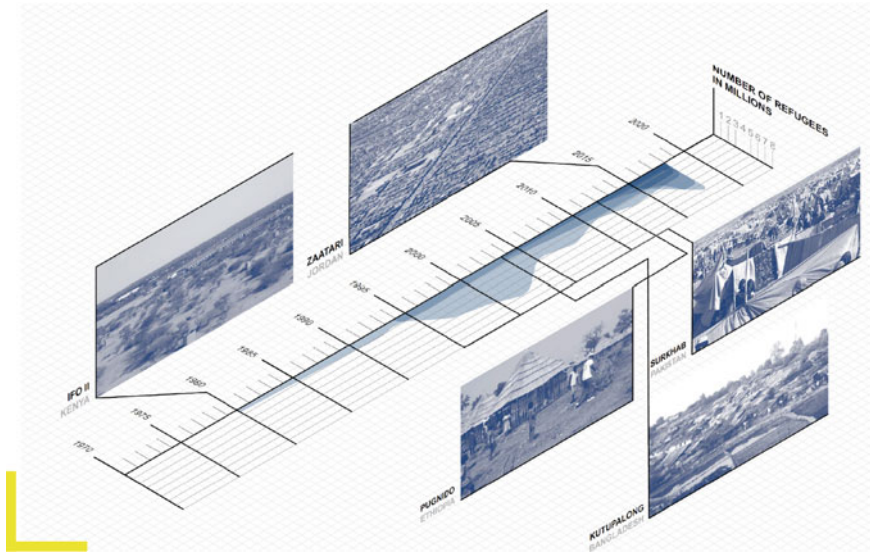
Fig. 33.4 Diagram: Rana Abudayyeh and Patrick Keogh (Population growth in various refugee camps from 1980—2018)

Land: Stop Eject, the formal language of camp-cities does not replicate any preexisting socio-spatial formula representing new ways of experiencing place.[9] Agier further indicates that since camps are hybrid realities suspended between indefinite temporalities and physical spaces transformed by occupants, their evolution into camps-cities is a logical and inevitable outcome.[10] Nowhere is the evolution from camp to social city more evident than in the Palestinian refugee camps. The product of the ongoing Arab-Israeli conflict, the Palestinian situation still is, to date, one of the more complex narratives of displacement.

Presently, there are "58 recognized Palestinian refugee camps in Jordan, Lebanon, the Syrian Arab Republic, Gaza Strip, and the West Bank, including East Jerusalem."[11] Most of those camps have endured turmoil, scarcity of resources, poor living conditions, and violence, among many other challenges, and were still able to evolve from basic emergency management sites to permanent camp-cities. The Palestinian refugee camps' governance is a triad of unequal authorities: the host country, the United Nations Relief and Works Agency for Palestine Refugees (UNRWA), and non-governmental relief organizations (NGOs). Additionally, many of the Palestinian camps were formed in proximity to existing urban centers (Fig. 33.5), utilizing a different approach from the more contemporary encampments established in isolated segments of the host country.

Located at the outskirts of the capital, Amman, Beqaa is the largest of 13 Palestinian refugee camps in Jordan.[12] Established in 1968, it accommodates 119,000 people in 1.4 km^2.[13] The camp's growth and development patterns have followed the typical growth trajectory of any Palestinian refugee camps in the region. It grew
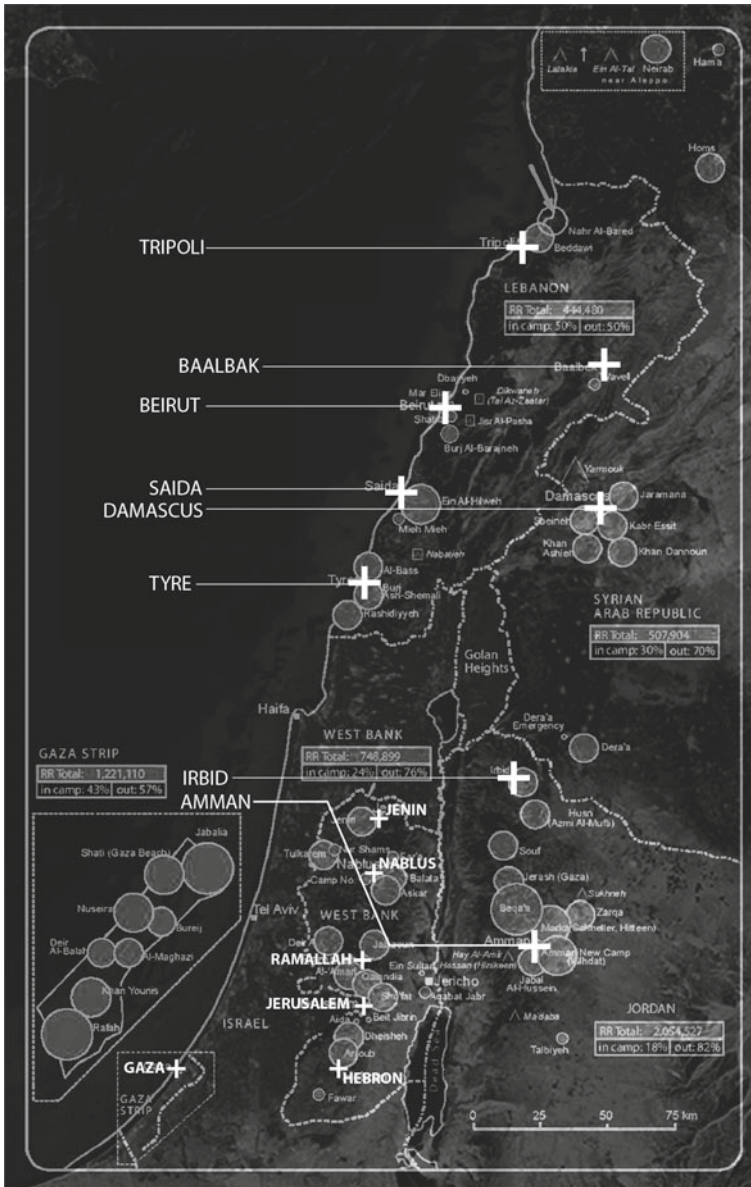
Fig. 33.5 Map: Rana Abudayyeh (Map showing Palestinian refugee camps in Jordan and surrounding countries; camps are established near major cities such as Amman, Beirut, and Damascus. *Source:* base map from www.passia.org)

vertically to accommodate the increasing population density and negotiate its limited allotted footprint. Densifying the camps was a response to the population increase and a strategy to secure the camp from the infringement of the host government. The camps' prolonged duration, coupled with its formal evolution, has roused many internal conflicts still active today, continually questioning the refugees' identity and belonging. Despite its troubled genesis and history, Baqaa camp-city is essential for maintaining the Palestinian narrative and collective identity alive regionally and globally. One of the multiple Palestinian urban camps in the region, Baqaa is a node in a larger network of camp-cities. Together, those camp-cities transgress the national boundaries of their host countries, re-establishing a robust regional societal fabric for the displaced Palestinian populace in fluid ways that the fixed traditional city cannot.

A collective social platform, the camp-city is in a unique position to negotiate a territory in which it can exist autonomously within the construct of a host government. In order to establish agency, understanding the refugee camp not only as a long-term setting but also as a social city that fully participates in urban life and contributes to host cities is imperative. Therein, the camp-city is a critical platform for sustaining refugees. It has the capacity to provide innovative approaches to displacement and is capable of supporting the specific vulnerabilities of displaced individuals and the needs of local communities. Yet, often the function of the camp-city is negated through a false narrative of invalidity as a robust urban construct, or it is portrayed as a threat to national security[14]; two falsehoods that deter from its potential and vitality as a municipality in its own right.

The Refugee City and the Bid for a Translocality

Inherently, refugee camps are permanently ephemeral cities.[15] How the camp-city functions spatially assumes a distinct trajectory as it carefully navigates between geopolitics of setting and the everyday acts of living.[16] Because refugee camps form as a result of crises, natural or human-made, they operate under different time/space parameters. In some cases, massive exoduses have formed—within months—to create entire cities. Such settings of shifting milieus challenge conventional evaluations of cities and reconfigure their parameters and implications. The agitated premise of refugee camps is key to understanding the realities and aspirations of their evolution into social cities physically and conceptually.

According to the UNHCR Policy on Alternatives to Camps, "a camp is any purpose-built, planned and managed location or spontaneous settlement where refugees are accommodated and receive assistance and services from government and humanitarian agencies."[17] In that same definition, the UNHCR document clearly states that this arrangement comes with "a degree of limitation on the rights and freedoms of refugees, such as their ability to move freely, choose where to live, work or open a business, cultivate land or access protection and services."[18] Examining this statement reflects the desperate situation that refugees often find themselves in upon arrival to a place of refuge. It goes to the heart of what assuming a refugee

status entails. Here, a transactional contract is implied from the onset that restricts a refugee's access to inalienable rights to liberty, dignity, and growth. To receive essential needs (food and shelter), a refugee must accept a measure of limitation that disparages their humanity and rights.

For years, refugee frameworks in the Middle East have operated under similar modalities catering to various populations of refugees that have traversed the region under varying terms and circumstances. With each mass entry of refugees, the regional attitude toward refugee encampments and settlements differed. The more successful approaches to camps were those that enabled their evolution into adaptable cities. More importantly, they understood and addressed the camps as permanent fixtures of the region's political, economic, and societal fabric.[19] This transition in thinking is essential for the development of an autonomous refugee populace; it also challenges the notion of the nation-state that firmly subscribes to exclusionary citizenship.[20]

While refugees in Jordan are not given Jordanian citizenship (with the exception of Palestinians who were afforded citizenship according to Jordanian Law No. 6 of 1954),[21] alternative means exist for refugee integration and inclusion in the national citizenry, albeit pseudo-citizenry.[22] These means include work-permit programs geared toward various refugee groups, access to public education and healthcare.[23] They are less than perfect; nonetheless, they attempt to aid in the assimilation of refugees within the social and civic structures. Much of these provisions remain equivocal with regard to the rights and obligations of refugees.[24] However, this ambiguous area of existence within the host location caters to organic and dynamic extensions to multiple localities as they operate within and without the host state.[25] Navigating the blurred boundaries of multiple settings requires a unique ingenuity from the refugees and the host communities, buttressed by sponsorships of foreign aid. Knowing very well the intricacies of this triad of connections and dependencies (camp, host, and foreign aid), refugee cities in Jordan—intentionally or inadvertently—made an active bid for translocality. By definition, translocality implies an expansion of place beyond prescribed physical borders.[26] Enabled by new global dynamics and established through migration flows and networks that are regularly altered, diverse open, non-linear processes yield overlaps between various places and people.[27] Under such assessment, a new model emerged where the refugee settlement morphed from the conventional "holding pen" mentality to a quasi-civic construct, a living camp-city.[28]

The camp-city and its complex genesis hinges on two big ideas: resisting fixed territorial thinking and a belief in a refugee's capacity to contribute to his/her transplanted societies. Kilian Kleinschmidt, a leading figure in humanitarian aid and the former director of Al Zaatari Refugee Camp in Jordan affirms that refugee camps are the cities of tomorrow.[29] He underscores the vitality of thinking of camps beyond storage facilities for people who are already stripped of all artifacts of their identity upon arrival at the camp.[30] Such approaches aid in the transformation of the camp into a social city. They allow people to forge places, employ their skills, grow communities, and start businesses. These initiatives are not only morally acute but existentially sustainable.

Learning from Al Zaatari: A Case Study of the Camp-City

Proportionate to its population, Jordan hosts the second-highest number of refugees worldwide.[31] The waves of refugees have altered urban and rural landscapes and have given rise to highly populated makeshift cities. One such city is Al Zaatari Refugee Camp (Fig. 33.6), located in northern Jordan. At its highest occupancy, "Al Zaatari housed around 150,000 Syrian refugees, becoming the fourth-largest city in Jordan."[32] In Al Zaatari's case, the transformation from camp to city took place over months, emblematic of the incongruous formation of the camp-city.

Unlike traditional cities, where growth happens gradually, the refugee camps' population expands exponentially, requiring immediate infrastructure and effective
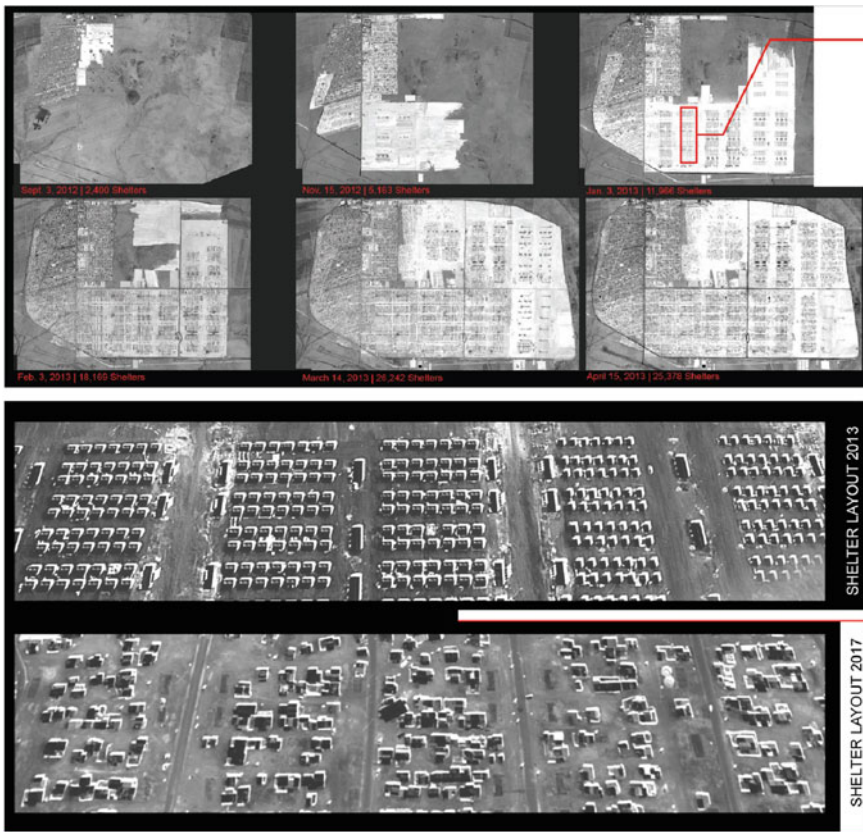

Fig. 33.6 Al Zaatari Refugee Camp satellite views: Rana Abudayyeh (Top images: satellite views showing the rapid growth of Al Zaatari Refugee Camp in a period of seven months. *Source*: www.nytimes.com. Bottom images: satellite images of shelters at Al Zaatari in 2013 and 2017 showing the evolving layout over the years to accommodate familial structures. *Source:* Google Earth)

planning. In general, the planning of refugee camps differs altogether from conventional city planning approaches. As opposed to the master plan, a prototypical organization module is implemented and propagated in the campsite while still leaving room for adjustment and modification.[33] This variability (embedded in modification) allows for a semblance of normalcy in the complex contextual realities of resettlement. As it straddles improvisational parameters of place and identity, the camp-city's built setting must cater to needs and empower its residents. Needs and empowerment are two aspects of sustaining life and livelihood that are seemingly at odds with one another. This disjunction is often a roadblock in the camp's sustainable development and the refugees' assimilation into the host country.[34]

Realizing this from past experiences with the displaced, Al Zaatari camp-city forged a new trajectory that favored a measure of internal camp autonomy paired with an interwoven symbiotic dependency with its neighboring native communities. At first glance, the camp's location seems to evolve from its proximity to the Syrian border. However, a closer inspection reveals the Jordanian authorities' acquired acumen navigating through narratives of multiple displacements in the region. Rather than assuming relative proximity to dense urban centers, the location of the camp strategically formed a connection with an existing rural community (Al Zaatari Village), even becoming its namesake. This overlap was meaningful in two ways. Logistically, the camp's economic and social development and advancement become linked to that of the Al Zaatari Village. Theoretically, it kept the Syrian populace away from the sight and mind of the majority of Jordanian citizens who were already struggling under economic and political instability that affected the entire region, reaching a peak at the height of the Syrian crisis.[35] The Syrian refugees' arrival coincided with Jordan's substantial escalating troubles, making the refugees an easy scapegoat for the deteriorating economic situation.[36]

The Jordanian populace itself is one that had to overcome multiple regional and domestic traumas. A few years before the Syrian refugee wave, an estimated 750,000 Iraqi refugees fled to Jordan,[37, 38] and decades before, Palestinian refugees settled there with a population today that exceed two million.[39] The Syrian crisis unfolded under an already fragile ecosystem adding unprecedented burdens to accumulating hardships within the country. While avoiding the negative tropes associated with refugees, Jordan's emerging Syrian refugee camp-city had to carefully navigate this complex topography and carve out its place in an already tumultuous setting. It doubled down on a trans-local identity and brought the skills and abilities of its Syrian dwellers to the forefront of its narrative. With that resolve, the Syrian pop-up camp-city, characterized by its urgent and speedy genesis, forged a new agency for its displaced individuals. It rendered the Syrian refugees productive and ingenious partners whose destiny and homeland return are linked to the success of their trans-local belonging.

Refugee Cities between Hospitality, Agency, and Belonging

Operating within and without the host state's laws, the refugee city's demands for presence and security challenge the host state's territorial sovereignty.[40] While the camp's built environment provides the residents' necessities, it must also mitigate the complex realities of providing shelter and amenities as it maintains an appearance of temporality.[41] Such operations require approaches that situate the camp's design language between two polarities. The first is the resilient infrastructure that can sustain the camps' fluctuations and maintain its functions for decades. The second is a calculated conveyance of impermanence.[42] Inherently, this disjunction puts the design of the camp at odds with its objectives. To get around this matter, several refugee cities in Jordan began to invest in performative design strategies that sustain the camp's needs and contribute to the host communities in both an immediate or deferred fashion.

An example of such strategies can be seen in the Al Zaatari camp-city shift to green energy in 2017, becoming the first refugee camp powered by solar energy.[43] Funded by the German Government, the 12.9-megawatt peak solar photovoltaic plant supplies the entire camp with the electricity they need. Additionally, connected to Jordan's national grid, it routes any unused power back into the national network. As such, the plant ensures an improved quality of life in the camp and supports the energy needs of the local community while helping the country meet its renewable energy goals.[44] The construction of the plant involved many of the Syrian camp residents, who worked alongside Jordanians during the installation process. This collaboration proved valuable to both parties. On the one hand, the workers gained additional income and professional skills.[45] On the other hand, this exchange facilitated a tangible positive portrayal of the camp-city citizen that negated the misguided narrative of the dependent refugee. Investments such as Al Zaatari's solar power plant establish a clear link between the pop-up refugee city and its neighboring host communities. They illustrate new ways of addressing attuned development agendas geared toward sustainable impact and positive change.

Pop-Up Cities and the Subsistence of the Societal Collective

There is a fluid, dynamic, and ongoing relationship between the traditional city and its surrounding camps, resulting in a symbiosis between the two. The interdependencies of both entities are essential to the subsistence of the societal collective, be it of the conventional city or the refugee camp. Each relies on the other for social and economic exchanges and stimuli. Extended displacement, which issues in the development of camp-cities, involves an active interplay between the displaced and local communities. In order to maintain a reciprocal contextual partnership under a permanent state of change and uncertainty, camp-cities effectively employ pop-up modalities that persist through the ebbs and flows of migration patterns. A pop-up

modality is understood as a disruption of the ordinary.[46] If the traditional metropolis is the ordinary state of urban affairs, then refugee camps are that disruption. Disruption here is not to be taken in a negative connotation; instead, as a means for the pre-existing static built environment to lose its sense of fixity and become novel and receptive to mutation.[47] One can conclude that the endurance and resilience of many traditional cities associated with refugee camps have stemmed from this interaction. A narrative, as such, is rarely acknowledged, often overshadowed by readings of burden and relief commonly linked to refugee sites.

The modalities under which cities have operated for centuries are in question today, along with the definition of locality that curtails the realities of a globalized world with fluid migration flows and economic interdependencies. The anchor of place has often played heavily in the narrative of assembly and the societal unit. Anchoring implies rooting; by default, a place-based spatial approach excludes non-place participants. Alternatively, a pop-up mode is a time-based intervention that operates in settings of change. Consequently, a tactical urbanity is necessary to provide economic resilience, environmental health, and human wellness. Such urbanity is unhindered by "who owns what" and "what belongs where," invested instead in activating shared platforms and communal settings. Not only do these approaches cater to flexible cities, but they also actively provide for a fluid citizenry.[48] In an article titled *Three Ways to Rethink the Concept of Citizenship,* the authors question how we define ourselves and our belonging in a future where connections and relationships occur simultaneously on local and global platforms. The article further questions the inclusivity of citizenship; it states:

> Citizenship is a socially created category imposed by those in power, designed to exclude some and include others. As a result, even if a group of people shares a space, there is a division between those who are granted the status of citizen and those who fail to meet the requirements.[49]

This analysis is poignant in general, yet it acquires a unique significance through the lens of displacement. Under any evaluation, in an era of rapid movement and development, giving occupants agency in shaping the future of their settings and social being is at the center of advancement.

Parallel to rethinking social and political parameters, formulating a global design practice responsive to exchange, displacement, and states of flux is integral. A globally engaged approach will rely on rethinking many of the tenets of design on which architects, planners, and users have come to depend. One such tenet is scale. Urban planning and design have conventionally settled on grand moves of demanding presence. While master planning and grand design gestures remain important, smaller interventions can also prove effective and be catalysts for profound impact. For example, in 2015, the city of Amsterdam donated 10,000 bicycles to Syrian refugees in Al Zaatari Refugee Camp in Jordan.[50, 51] This investment, while seemingly trivial, contributed to the camp's advancement and the quality of life on many levels. The bicycles facilitated transportation and quickly became the most popular means of traversing the camp. In response to their rising popularity, many bicycle repair shops popped up around the camp, stimulating the camp's growing economy.[52, 53] It is

important to note that those bikes do not only benefit the camp, but they also help alleviate some of the congestion of bicycle parking in Amsterdam,[54] a city of 800,000 people and 880,000 bicycles.[55] These reciprocal acts of strategic interventions are at the heart of a new approach to urban thinking and global exchanges.

The Cyclicality of Urban Growth and Decay

While the viability of urban development is dependent on many factors, it is always tied to economic growth. A crisis of any kind triggers displacement, and that, in effect, destabilizes economic structures. This causality ultimately leads to substantial decay in the urban fabric of any city. We can see this in many cities across the globe. Some recover while others still await a resurgence. Still anticipating its recovery, Detroit stands as a stark testament to this reality (Fig. 33.7). Detroit's economic, social, and racial unrest started in 1950 and carry effects that are still prominent today in its cultural and economic fabrics. Despite many attempts to invigorate Detroit, by 2017, the business vacancy rate was at 25.9%, the residential vacancy rate was 22.4%, along with an overall vacancy of 21.9%.[56] There are many factors at play in Detroit's narrative (such as race and industry), and many attempts at its revitalization that had short-lived measures of success. However, what was missing was a longevity that is dependent on not only economic stimulus but also a fluid populace. Where the old-world demanded stability, resilient development, and sustained growth, in a contemporary state of global flux, indeterminacy thrives. In his book *Extreme Economies*, Richard Davies points out the urban and economic success of resilient economies, as illustrated in the Al-Zaatari Refugee Camp, is attributed to informal developments and organic processes that thrive without the state's involvement amidst significant hindrances.[57] Settings that cater to such parameters prompt but do not impose; they operate within pliable formal agendas that anticipate fluctuation as a fundamental contextual requisite. Temporal, spatial mechanisms, responsive reuse, and guerrilla adaptation proliferating between dormancy and activity are at the essence of pop-up urban thinking. Such provisions depend on a measure of dormancy (and sometimes decay) necessary for cyclical urban regeneration.

Conclusion

The evolution of cities is tightly tethered to movement in all its forms and manifestations, rendering cities as organisms in continual flux. Even though the circulation of people, information, and goods is essential to the livelihood of cities, forced migration often stirs up contested realities for millions of people, yielding the most complex narratives of population displacement known to date. Refugee camps are continuously unfolding within regional endemic migrations, limited resources, and ongoing political and economic challenges. Redefining themselves in close concomitant to
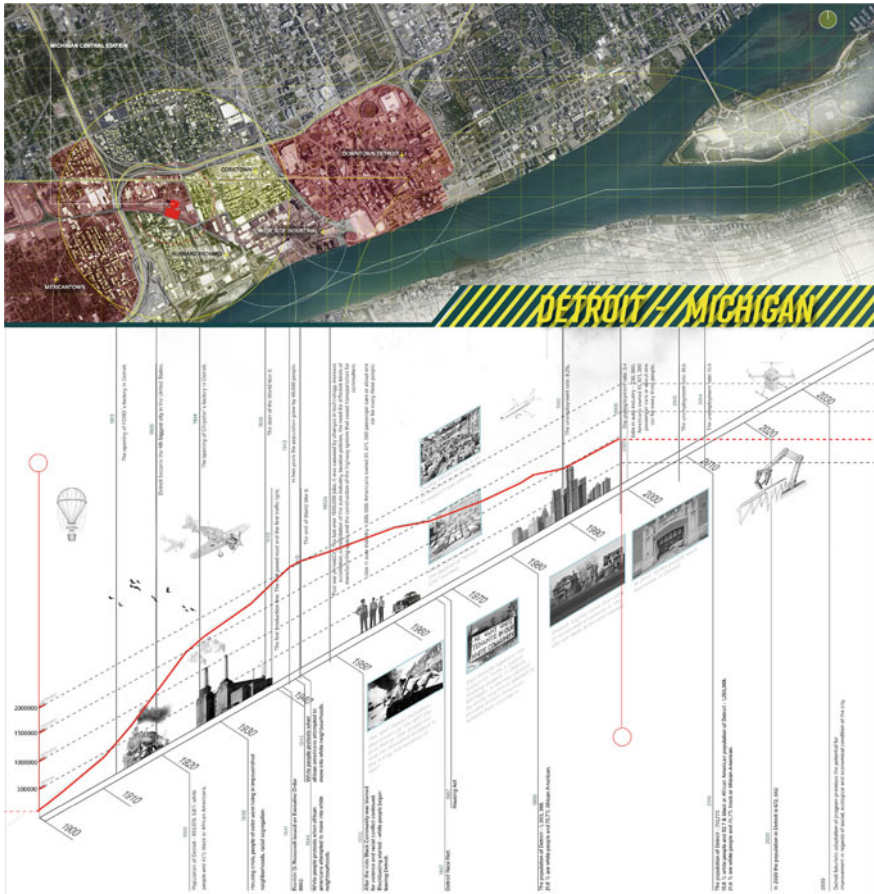
Fig. 33.7 *Collage:* Brendan Wallace and Marta Kaczor. (Aerial and timeline of Detroit 1920–2020, documenting population growth and decline)

contemporary environmental developments, the evolution of refugee camp-cities is constant. They subsist through robust social structures that transcend geographic location. Hence, they offer a paradigm to our transforming universal human condition that, despite earnest bids for permanence and stability, finds itself amid a heightened state of transience and unrest.

Today, forced migration must be addressed as a constant driver of logistical urban planning and be gauged in light of its opportunities for reinventing cities. As cities continue to navigate the complex terrain of porous borders, fluid associations, and global markets, a participatory approach to planning and design is inevitable. It is prudent to assume that this decade will witness an acceleration of political and environmental changes, world conflicts and crises, global market and policy shifts, and dramatic generational changes, among other factors. Herein, cities must

undergo another evolution, where accommodating constant flux outweighs spatial demarcation and management.

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Chapter 34
Leveraging Rural Urbanisms: Design at the Intersection of Formality and Informality in Xixinan, China

Shannon Bassett

Abstract Lensed through the design of public space, this chapter investigates the ways in which planners and designers can learn from observing informal urbanism, as opposed to the more rigid practices of top-down urban design. It examines how the informal practices of everyday urbanism might begin to inform more tactical design strategies—situated at the interstitial—where informal urbanism informs the formal. These provocations are interrogated through the findings of an architecture and urban design studio in Xixinan, Anhui Province, China. Based in a rural village, a series of student design projects investigated the potential for distilling the lessons of informality as strategies and tactics for the recovery of the public realm. This pedagogy sought an alternative urbanization model for China that gains insight from the informal rural urbanisms of its countryside. Situated through strategic design interventions, this academic studio sought to improve the quality of life of villagers through the enhancement, not erasure, of everyday spaces.

Keywords China · Informal urbanism · Urban design · Informality · Villages · Everyday

What are the ways in which planners and designers, in the design of public space, might learn from observing informal urbanism, as opposed to the more rigid practices of top-down urban design? Informal practices of everyday urbanism, as coined by Chase, Crawford, and Kaliski,[1] begin to inform more tactical design strategies situated at the interstitial, where informal urbanism informs the formal. Architects and urban designers working within a more hybrid framework of the informal can re-inform the "formal" as part of a consistent feedback loop. In the practice of learning from informal urbanism, architecture and urban design educators—trained in top-down design practices of professional education and practice—can better situate design by learning from the informal, and thus, giving agency to the communities in

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which we are working. Academic forums can thus translate these understandings of the informal and engage them in more open-ended frameworks of strategic urbanisms, imbuing layered meanings and performative ecologies that lead to sustainability and resilience.

This chapter investigates the ways in which planners and designers, in the design of public space, might learn from observing informal urbanism, as opposed to the more rigid practices of top-down urban design. It examines how the informal practices of everyday urbanism might inform more tactical design strategies. These actions may be situated at the interstitial, where informal urbanism *informs* the formal. To draw out these provocations, I will discuss the findings of an architecture and urban design studio run during the summer of 2015, based in a rural village located in Anhui Province, China. This studio, "*Village Acupunctures—Designing Rural Village Acupunctures in Xixinan, Anhui Province, China*", was a collaboration with Dr. Kongjian Yu, Dean and Professor at the Graduate School of Landscape Architecture at Peking University and President and Principal at Turenscape.[2] The studio operated at the intersection of landscape and ecology.

Intersectional (in)Formalities

What are the potentialities for this methodological framework of community and urban design, working within a rapidly urbanizing context in East Asia? In these rapidly urbanizing contexts, experiencing increased migration from the Chinese countryside, there is current pressure for development. Prevailing forms of urban development in China have been engaged in more formalized, top-down strategies of urbanization rooted in Western modern models. These approaches both rationalize, as well as standardize, urbanism through such tropes as the separation of land uses and single-use zoning.

New towns in China include so-called Eco-Cities that have often literally wiped out their natural ecologies,[3] new economic zones, and the New Socialist Village Countryside—endeavors launched by the Chinese government in 2005 under the leadership of Hu Jintao, former President of the People's Republic of China. Among these phenomena of prevailing Chinese centralized planning practices, urbanization is formally and scientifically designed and standardized by pattern book planning; it is devoid of specificity toward local landscape, climate, geography, social needs, and cultural concerns rooted in China's traditional informal planning practices.

These new forms of top-down formal urban design practices lie in opposition to the more "messy urbanism" found in the richer informal urbanism of rural villages in the Chinese countryside. Furthermore, what is the agency for ecological urbanism as a strategy to address the design of these public spaces, engaged in the practices of informal urbanism? Can these spaces of the interstitial, or *terrain vague* as coined by Ignasi Sola de Morales,[4] serve as strategies and tactics for the recovery of a public realm, as an alternative urbanization model for China rooted in the informal rural urbanism of its countryside?

This chapter probes such questions, principally through strategies deployed in the design studio, generated by a reading of informal practices of the everyday. It attempts to synthesize the lessons learned from the design research of the studio. Further, it postulates how its methodological framework might be applied by translating lessons learned from the informal, into strategies and tactics for formal interventions. Further, it speculates on how these prototypical design interventions for village urbanism in China, situated between informal and formal urbanism, might serve as useful design prototypes for an alternative urbanization model for China.

Village Acupunctures: Designing Rural Village Acupunctures in Xiaoxian *Anhui Province, China; Architectural and Urban Design and Studio, Summer 2015*

In 1949, with the founding of the People's Republic of China, China's urban population was at 10% urban and 90% rural. With the opening of China during Reform under Deng Xiaoping in 1978, China was then at 20% urban and 80% rural. In an inversion, it is predicted by the UN that in 2050, China will be 85% urban and 15% rural. With a population of almost 1.5 billion people, the implications of designing for ecological resiliency and stewardship are significant. This has been critical in propelling a transformative Chinese landscape. Since Reform, and China's opening to the market and modernization in 1978, there has been a mass migration from the countryside to cities for employment.

As portrayed in the 2009 film, *Last Train Home,*[5] over 130 million migrant workers travel back to their home villages during the Spring Festival and Chinese New Year. This annual event marks the world's largest human migration. The *hukou* system of household and individual registration notes a person's status as either rural or urban. Rural workers working in China's major urban cities with a rural hukou do not have access to the same social welfare system services in the city as do individuals with an urban hukou. Many, if not most, of these migrants occupy informal urbanisms themselves within the cities they work. They occupy the interstitial or *terrain vague* in temporary housing on construction sites of the new buildings and infrastructures which they build. Much of China's new formal urbanism is top-down and resultant from top-down, twentieth-century modern Western planning models. These approaches are inspired by and borrowed from *Congrès international d'architecture modern (*CIAM) and Ebenezer Howard's Garden City models, while imbued with Chinese characteristics.

In opposition to the prevailing and overarching trends and patterns of rural to urban migration, there has been a recent inversion in migration flows. This has led to a second wave of migration in the form of reverse migration back to the countryside, part of China's own "*Back to the Land*" movement.[6] This reverse migration has been exacerbated, in large part, by increased pressures on the environment in Chinese cities. The rapid urbanization and modernization of cities have exacerbated severe

air pollution, the depletion of water and the aquifer due to construction, increased traffic congestion, and threats to food security. This development occupies valuable agricultural lands by new and formal urbanization. Intellectuals, artists, and the elite are seeking retreat from the ills of industrialized Chinese cities. They are buying housing in the Chinese countryside if they have the means.

Chinese rural villages have now become new sites and territories for new interventions and social infrastructures. They also serve as useful lessons in informal urban practices of resilient sustainable design practices rooted in traditional Chinese Village design. *Xixinan cun* (directly translated from Mandarin as "Village of west west of south") is located in the Huangshan (Yellow Mountain) region of Anhui Province and part of the Hui watershed. The village has been there for millennia; it is built of predominantly traditional, vernacular Hui architecture, and over laid with a sophisticated hydrological infrastructure of waterways. These include canals and irrigation systems that weave through its fertile agricultural lands (Fig. 34.1). Historically, the entire Huangshan area was important for its poets, writers, and painters. The nearby traditional villages, Hongcun and Xidi, are under UNESCO heritage site designation. The village is surrounded by productive and fertile agricultural fields and subsistence farming, where almost 90% of its residents are still farming. The model is self-sustaining and operates within a closed-loop system of resiliency.

Forces of urbanization are currently acting on the Chinese countryside, most noticeably with the construction of the high-speed rail train system. China has been implementing high-speed rail infrastructure across the country in the last decade.

Fig. 34.1. Aerial view of Xixinan. *Image* Shannon Bassett

The system is being built throughout China with lightning speed, connecting its major East Coast cities with rural villages in the countryside. During the studio in the Summer of 2015, the high-speed rail infrastructure connecting Huangshan City and Shanghai was being constructed just outside the gate to Xixinan Village. Traveling at speeds of up to 320 km an hour,[7] high-speed travel has collapsed travel times for dwellers in first-tier cities on the East Coast such as Beijing and Shanghai. Huangshan City and the Huangshan Mountains have become a mecca for Chinese domestic tourism. There is newer tourist development to the north of the river, in the style of the traditional Hui architecture, located across the river from the south shore traditional village of Xixinan (Fig. 34.2).

Chinese Artist Ou Ning started the Bishan Commune and Rural Reconstruction project in the Village of Bishan. Bishan lies 60 km away from Xixinan, in Yi County, Huangshan. It serves as a counterproposal critiquing China's prevailing formal urbanism model of development.[8] It had the School of Tillers, Bishan Bookstore, its own currency, and homestay, as well as the boutique Pig Hotel. Ou Ning's own house, the Buffalo Institute, formerly a large Hui-style compound, hosted many artists and intellectuals. This was a radical, utopian, counterculture social experiment which ran from 2011–2016, before being shut down by the Chinese government.[9]

Fig. 34.2. *Photo* Shannon Bassett

Village Acupunctures Xixinan, Anhui Province; Summer 2015 Design Studio

The current rural–urban divide in China continues to grow and create massive challenges with respect to environmental, social, and cultural equity and resiliency. At the same time, however, many of China's noted elite are now moving back to the countryside for its clean air and healthy food. Other villagers are seeking innovative and entrepreneurial ways in which they can remain in their villages without having to travel long distances to work.

In this studio, students engaged first hand with many of the pressing issues facing China today—particularly in relation to its changing landscape—as it continues to modernize at a rapid rate of urbanization. The studio envisioned strategic planning and sustainable tourism practices in an area undergoing pressure for modernization. Other strategic plans included keeping villagers living full time in the village, opposed to migrating to large cities for work.

The studio was a collaboration with Turenscape Academy, founded by Kongjian Yu. Turenscape Academy was specifically founded so that scholars and intellectuals could learn from the traditional ways of living in relation to the landscape and water. Chinese traditions of agriculture and rural life are intertwined in its pedagogies. Turenscape and Yu have spearheaded and implemented urban projects across China that critically engage in landscape and ecological recovery: "rethink(ing) industrial technology-based hard engineering solutions …and rediscover(ing) nature-based and symbiotic solutions, which can often be inspired by the ancient wisdoms of living with nature."[10] Their projects steward constructions of these ecological infrastructures grounded in local ecological knowledge. These include projects such as *Sponge City* and *making friends with floods*—works that explore performative ecological urbanism.

The Village of Xixinan serves as a best-case practice and case study on the integration of sophisticated hydrological systems. Here, morphology and human inhabitation is a balanced, self-sustaining closed-loop, and resilient ecosystem (Fig. 34.3). Our understanding began at the zoomed-out scale where the village was situated, with respect to its larger regional infrastructural ecological systems. These systems begin and flow from the surrounding Huangshan Mountains as part of the Huai watershed in the Huizhou District. Water from the river, which travels from the Huangshan Mountains, enters the village where it is controlled by a weir. Several canals run throughout the village, which then branch into irrigation systems to feed productive and fertile agricultural lands surrounding the village (Fig. 34.4). The forest along the bank also floods. The village has its own integrated ecological infrastructure. There are several vernacular architectural infrastructures whose designs are generated from this informal water urbanism. These include viewing structures, platforms, and tanks.

Students began mapping studies to gain a regional understanding of the site through the lens of its landscape. These included diagramming the various layers of the village such as its hydrology, infrastructure, and agriculture, which allowed
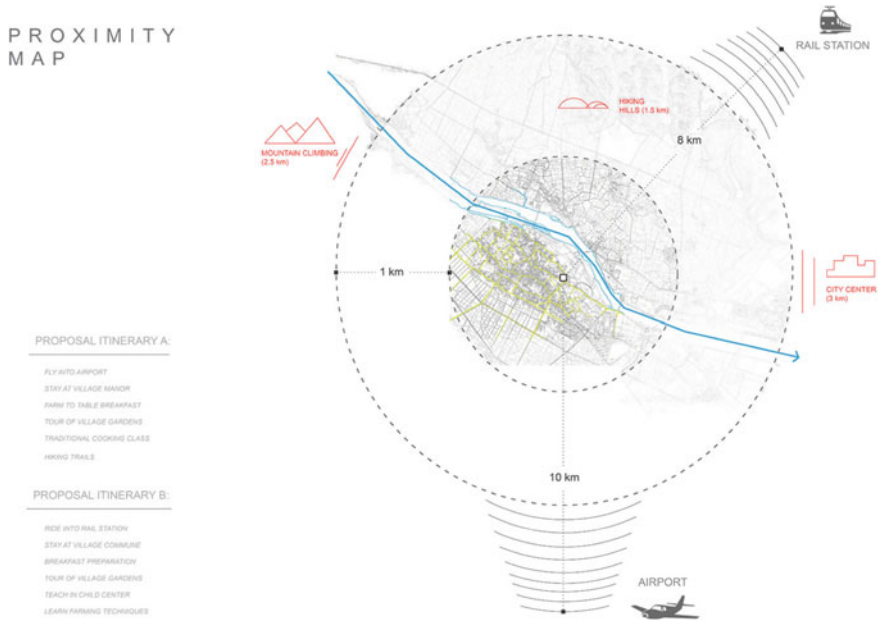
Fig. 34.3.   Xixinan, Anhui Province. *Drawing* Shannon Bassett
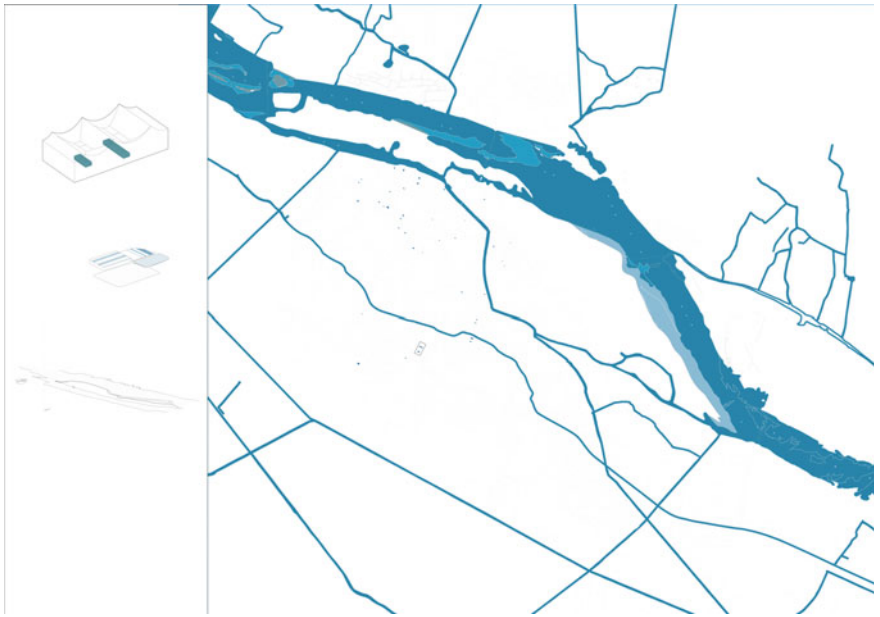

Fig. 34.4.   Huai watershed. *Drawing* Shannon Bassett

them to learn about the inter-dependence of the village and its ecologies. At the inter-mediate scale, students began to weave and make relationships between the natural ecologies of these landscapes, with its morphological fabric and architectures. The proposals featured herein offer robust design solutions that layer social scaffolding with infrastructure, imbued with new programming, landscape recovery, and social and community building. Interventions into the existing fabric and infrastructure are aimed to ameliorate existing ancient infrastructures.

Mapping Methodology(ies) and Site Reconnaissance

The design studio acted as a testbed for design research, engaging a methodology of mapping and the intrinsic understanding of territory(ies) across a series of nested scales of landscape and ecologies. These scales included: the extra-large (XL); large (L); medium (M), and small (S).[11] At the XL extra-large scale, students engaged in a McHargian-inspired mapping analysis of different layers of the village, including its hydrological systems, agricultural plots, and vegetation.[12]

Zoomed into the L-large scale of the village, students generated figure grounds, massing studies, diagrams of circulation systems, and the ebbs and flows of the human and non-human systems. They were also asked to map the village's urban fabric through the Noli map, thus identifying public spaces in the village, or the commons, as defined by village urban spaces where everyday practices unfold. This would later inform spaces for village acupunctural design interventions.

Students then zoomed into the M medium or S small scales of architectural typologies within the village (Fig. 34.5). This included ancestral homes and traditional housing typologies with the nested scale of water courtyards.

Village Field Research

Field research of the village was executed through photographic and sketching documentation. Students also interviewed residents, with assistance of a translator. This research methodology was framed by everyday urbanism and the theoretical frameworks of Michel de Certeau's seminal book, *The Practice of Everyday Life.* As in many traditional Chinese cities, formally designed spaces, such as the park next to the Village Council, remain predominantly unused save for more formal and official events. Various landscapes of the village, including an orchard with relics and ruins, also remained closed. One of the design proposals recovered these unused landscapes and connected them as a performative ecological system.

Students mapped the intrinsic relationships between the villagers and water in various permutations and manifestations across the village fabric. The circulation pathways run through the village's "negative space in between" the enclosures and
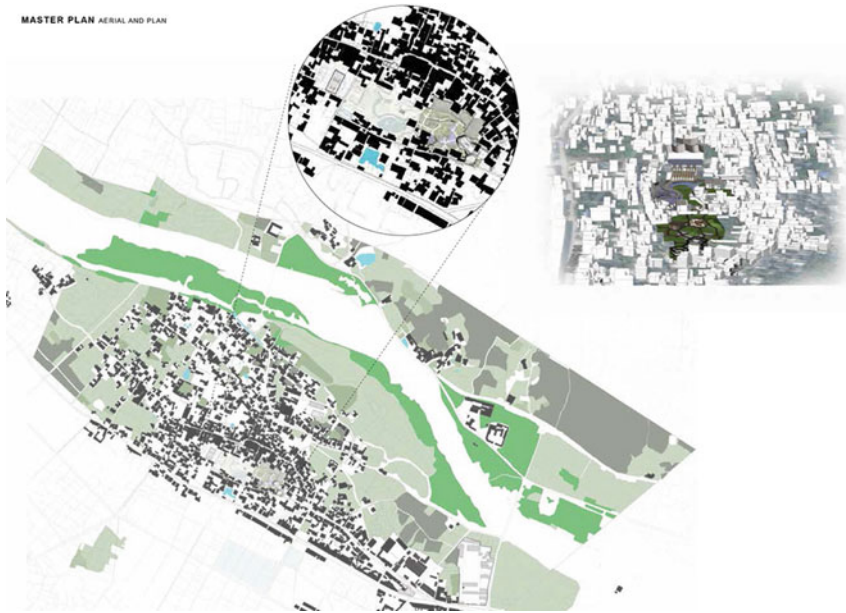
Fig. 34.5. M medium or S small scales of architectural typologies within the village. *Drawing* Shannon Bassett

thresholds. These pathways join internal yards, and then thresholds into water court-yards that form occupiable interstitial spaces of people along the waterways. There is a sectional condition which steps down with a series of platforms and access. These spatial sequences support various social structures, where informal and spontaneous interactions occur.

Design as Village Acupunctures

The theoretical framework for the design interventions across the village was framed through a series of informal urbanisms. Proposed programs were grounded from an understanding garnered from fieldwork research, identification, and taxonomy of everyday urbanism. These conditions intersect with occupancy of social space and informal urbanisms in the village. Areas of intervention were identified and nego-tiated through mappings. Zones and areas of intervention of potential acupunctural design intervention were then identified, generated from a synthesis of the find-ings from the mapping exercises. Design interventions were framed and situated in between the informal and the formal. These strategic acupunctures would have the agency to improve quality of life through the enhancement, rather than erasure, of the everyday spaces of the village and villagers. This was framed from the exhibit, "Small

Scale, Big Change: New Architectures of Social Engagement," held at the Museum of Modern Art (MoMA) and ensuing publication of the same name.[13] These village acupunctures, as with "Small Scale, Big Change", worked within an expanded field of social, cultural, and ecological sustainability and stewardship.

This is a radical departure from the "New Socialist Village" rural–urban model by the Chinese government, launched in 2005, where productive agricultural lands are taken from the farmers, land banked, aggregated, and then the farmers were relocated to low-rise apartments. In the framework of the "Back to the Land movement" and a "Village Acupunctures" approach, rural villages are landscapes of potential. These places operate at the interstitial, between informal and formal urbanism; they build upon and do not erase richly informal urbanisms. Designs are imbued with layered programs that recover ecological and cultural landscapes through resiliency and land stewardship. The following five interventions are characterized by layered programs that operate as acupunctures. They are grounded in the spatialization of the everyday.

Bridge(ing)

A new pedestrian bridge is proposed to both replace and enhance the existing bridge that currently connects the southern shore of the river with the original historic village of Xixinan to the northern side—an emerging tourism zone (Fig. 34.6). The bridge acts as both an infrastructure and an architecture. It is layered with new programs that curate and mitigate the increasing congestion of competing mobilities. The design creates a viewing platform with visual connections to the Huangshan Mountains and the larger landscapes beyond.

Platform(ing) Water Village Urbanisms

Spaces of the interstitial zones between the walls of private yards and residences currently stage everyday activities of the village such as washing vegetables and clothing (Fig. 34.7). These everyday spaces are sites for both informal and spontaneous social interactions and gathering. Portions of the solid wall are opened, new maker spaces and community centers are introduced. Enhanced platforms are integrated onto existing platforms, supporting the informal urbanisms currently happening there.
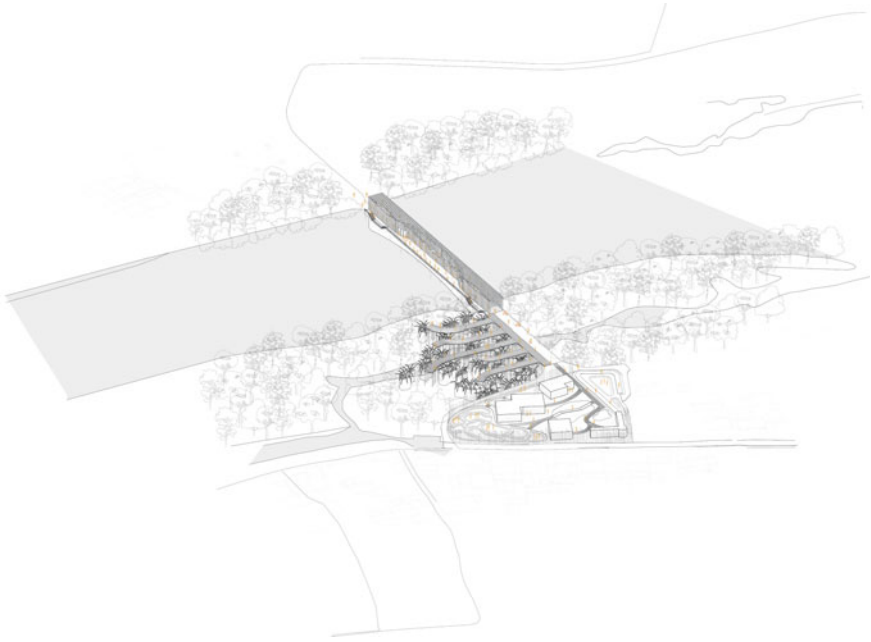
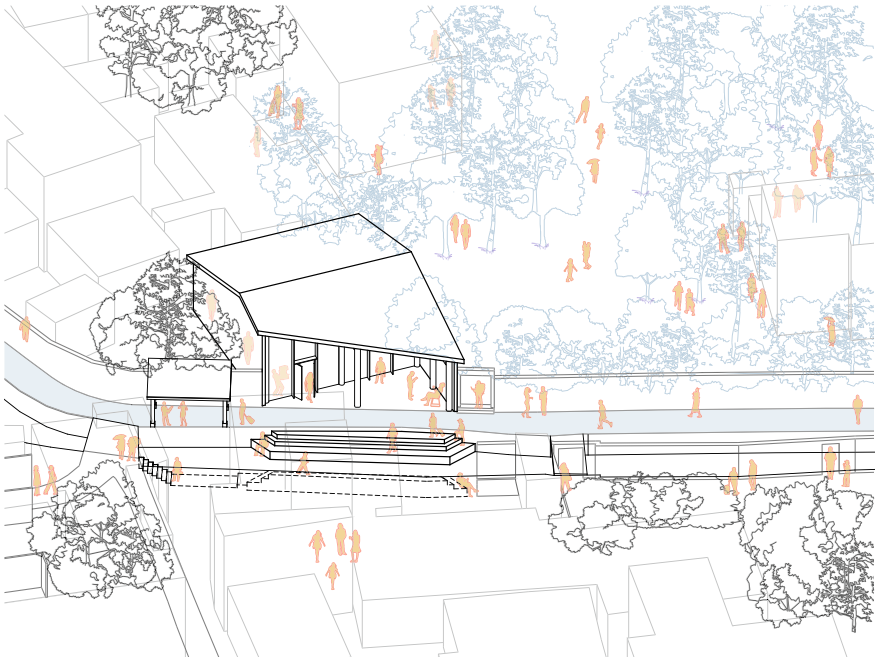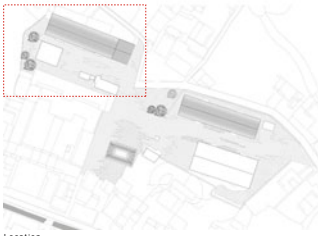**Fig. 34.6.** New pedestrian bridge proposal. *Drawing* Shannon Bassett

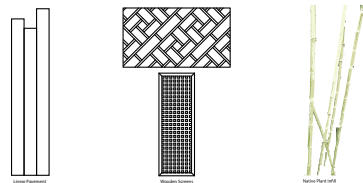**Fig. 34.7.** Interstitial zones. *Drawing* Shannon Bassett

Existing Courtyard Condition

Location

Kit of Parts for Development

Fig. 34.8. Abandoned buildings. *Photo* Shannon Bassett

Adaptive Reuse

One team mapped abandoned buildings within the village, identifying them as sites
for intervention (Fig. 34.8). An educational center integrates two abandoned build-
ings together through a landscape recovery of the spaces in between. It introduces a
formal educational complex imbued with new programs. The many buildings within
the yard are connected by the programming of interstitial spaces between them, as
well as through manipulation of surfaces and landscape texture treatments (Fig. 34.9).

Occupying Interstitial Space

At the scale of the river's shoreline, the interstitial space between land and water
is inhabited with a new farmers' market (Fig. 34.10). Its design includes viewing
platforms. Part of its architecture floats; it registers the changing water level of
the river. Viewing platforms cantilever over the water to create scaffoldings for fish
habitat. Locally sourced materials, including bamboo from groves within the village,
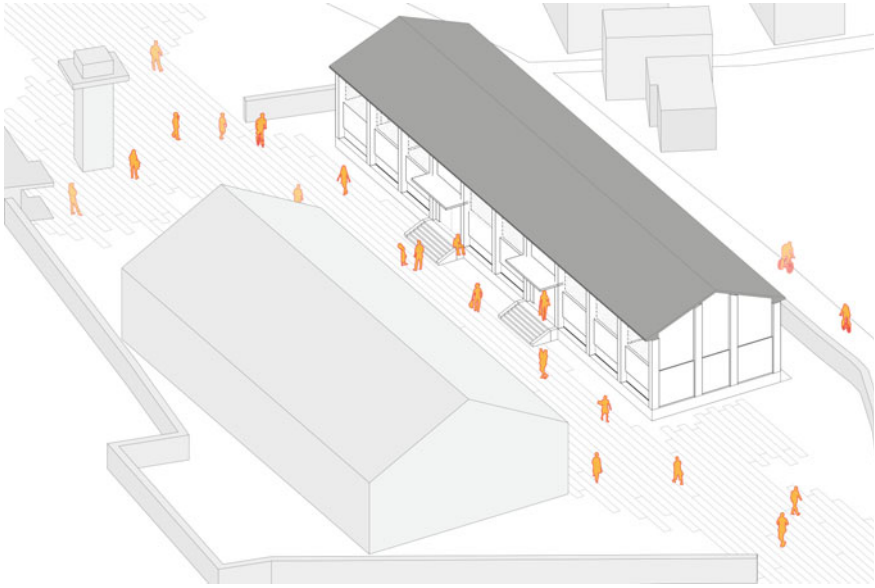are used as construction materials.

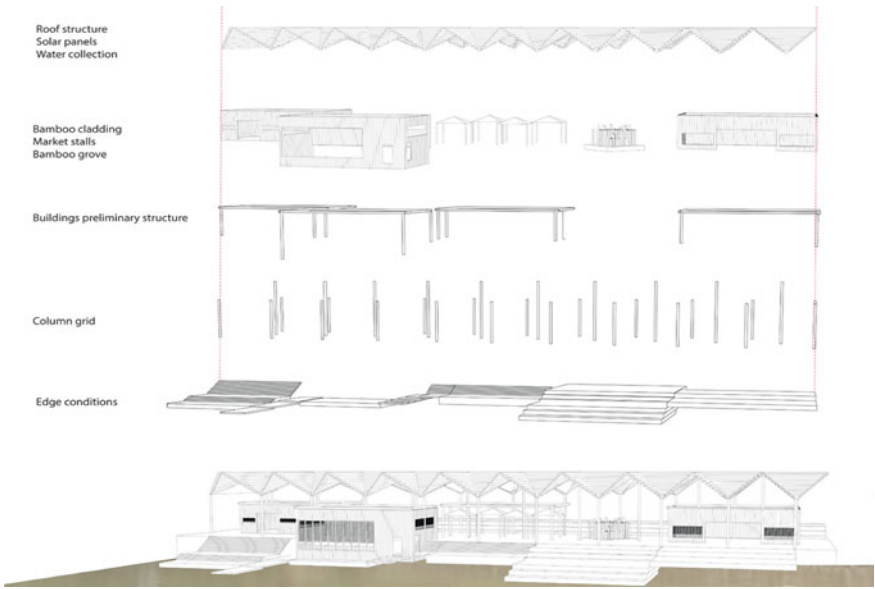**Fig. 34.9.** Adaptive reuse of abandoned buildings. *Drawing* Shannon Bassett

Fig. 34.10. Farmers' market proposal. *Drawing* Shannon Bassett

Village Demonstration Kitchen

A demonstration kitchen is sited in the field. This also includes a bee house.

Conclusion

This case study of the Xixinan Village Acupunctures studio offers a series of proto-
typical examples of alternative ways to improve the standard of living for Chinese
villagers. Situated in the villages, this is a more incremental (village) urbanism
approach, situated in between informal and formal urbanisms. It builds on existing
social scaffoldings and the everyday life of the villagers and these special conditions.
Strategic and tactical urbanisms of the everyday curate new and layered programs
in tandem with traditional programs. Thus, this proposal works to improve the lives
of the villagers. Here, old programs and traditions are both respected and preserved;
new programs are introduced in a more balanced approach to urban development
and modernization.

Tactical interventions afford the potential for incremental (village) urbanism
within the environment. Such efforts are grounded in the historic and traditional
village fabric imbued with meaning and memory. At the larger scales of China's
urbanization and modernization process writ-large, this allows families and young
people to stay in their villages with their children and reverses the prevailing migrant
flows from rural areas to larger cities. It provides a framework for resilient envi-
ronments within an agrarian landscape that builds on the rich traditions of subsis-
tence farming. It creates closed-loop, self-sustaining, and resilient communities that
balance human inhabitation with environmental stewardship and security.

The post-COVID Chinese city and the potentialities of this studio-based research
are grounded in informal urbanisms as an alternative development model for China.
In the context of the post-COVID Chinese city, resilient urbanism and alternative
strategies to the current pattern of Chinese urbanization are critical. A recent article
in the *Washington Post* by Nick R. Smith postulates on the impact of overcrowded
wet markets in Wuhan: "…the speed and scale of Chinese urbanization (has) played
an important role in the pandemic, and that (China's) continuing push for rapid
urbanization makes another pandemic more likely". He further links the rapid trans-
formation of China's food systems, degradation of its vast countryside, and erosion
of its subsistence economy to the decline of social–ecological relationships within
villages, as well as the likelihood of future pandemics.

Counter to the Chinese government's New Socialist Village Countryside top-
down rural–urban model, Village Acupunctures situate themselves more nimbly,
in between informal and formal urbanism therein lies an inherent flexibility and
open endedness for DIY interventions from the villagers. It provides agency through
performative design. Village Acupunctures, embodied in informal urbanism, offer
viable alternative spatial solutions that make more robust, balanced relationships to

village life and local food production. This includes the preservation of subsistence farming in a closed-loop system. These acupunctures, within the spaces of the village, can improve the health and welfare of its citizens. Recovering landscapes can also provide access to clean air, water, and local food security. Furthermore, within the context of the COVID and post-COVID city, socially equitable access to open space systems can provide respite from the high density of formal urban design in China. It can offer new opportunities and possibilities to leverage rural urbanisms and design at the interstitial of the informal and the informal.

Endnotes

1. *Everyday Urbanism*, Edited by John Chase, Margaret Crawford and John Kaliski.
2. Architecture/Urban Design vertical studio of Undergraduate and Graduate Summer Studies Abroad program led by the author at the University at Buffalo SUNY School of Architecture and Planning.
3. Urban Flux article by author, "Tianjin Eco-city and the Hong Kong Shenzhen biennale, name book.
4. Terrain Vague, a term coined by De Sola-Morales Rubio, Ignasi, "Terrain Vague" in *Anyplace*, edited by Cynthia Davidson.
5. Last Train Home (Gui tue lie che), Director LIxin Fan, 2009.
6. Ibid.
7. The author spent from 2006 to 2016 in China through teaching and lecturing at various Universities and Schools of Architecture and Planning there, as well as conducting field work and research and took many high-speed rail trains. A speedometer mounted at the front of each rail car showed the speed increasing until it would hit and clock approximately a maximum of 320 km/h.
8. Short Documentary, directed by Sun Yufan and Leah Thompson, "Down-Countryside https://www.chinafile.com/multimedia/video/down-countryside; accessed May 3, 2021.
9. We visited Bishan Commune and met with Ou Ning during this studio trip. Ou Ning presented the Bishan Commune project to us at that time.
10. (Yu, 2010, 2017). Wu, C., M. Qiao, and S. Wang. 2013. "Enlightenment from Ancient Chinese Urban and Rural Stormwater Management Practices." *Water Science and Technology,* 67 (7): 1474–1480.
11. This makes "homage" to the seminal book of the same name, "XL, L, M, S" by Rem Koolhaas and Bruce Mau.
12. Here I refer to the seminal text, Design with Nature, by Ian McHarg.
13. Exhibit at the MoMA and ensuing publication, "Small Scale, Big Change: New Architectures of Social Engagement". The exhibition presented "eleven architectural projects on five continents that respond to localized needs in underserved communities." Further, the works "propose(d) an expanded definition of sustainability that moves beyond experimentation with new materials and technologies to include such concepts as social and economic stewardship".

Shannon Bassett is a Canadian–American architectural and urban designer. Her research, teaching, writing, and practice operate at the intersection of architecture, urban design, and landscape ecology. Her research focuses on China's explosive urbanization, post-industrial landscapes, and informal urbanism. Her writing has been published in *Topo*s, *Urban Flux Landscape Architecture Frontiers Magazine* (LAF), and *Canadian Architect*. Bassett is currently collaborating with the Delhi School of Planning and Architecture (SPA) on the conservation and urban redevelopment of the old walled city of Shahjahnahbad through ecological urbanism strategies. Her work has been exhibited at the Hong Kong Shenzhen Bi-City Biennale of Urbanism and Architecture (2012) and the BUGAIK International Architectural Exhibition in South Korea.

Part V
Africa

Chapter 35
Towards Sustainable Interventions in Unplanned Communities: Adapting the Urban Nexus approach to the Greater Cairo Region

Check for updates

Sahar Attia

Abstract Governments in the Global South are still searching for effective solutions to deal with informal settlements. In this context, the urban nexus concept was implemented in a few countries as an approach to achieve integrated development solutions, guiding stakeholders to identify synergies that could exploit all available resources. In Egypt, the concept of the urban nexus is still an emerging approach, like in most developing countries. Greater Cairo is expanding to reach and include rural areas that are becoming urban because of their location within the city boundaries but are still characterized by their rural socio-economic, cultural features, and poor quality of life. These areas are classified as unplanned communities. This chapter questions what strategies can best fit this typology of informality, and examine the relevancy of implementing the urban nexus as an appropriate approach for unplanned extensions in the region. Adaptation and localization are discussed to re-frame the nexus as a successful inclusive participatory urban development approach. The author proposes to revisit the concept of the urban nexus while adapting it to achieve effective and sustainable interventions in unplanned communities.

Keywords Unplanned communities · Urban nexus · Urban informality · Cairo · Quality of life

Informality remains the eternal problem for many cities in the developing world. Over 863 million inhabitants live in slums and informal settlements in urban areas.[1] Informality has also been a major issue in the New Urban Agenda (NUA) and has impacts on the Sustainable Development Goals (SDGs). Its implications are not only related to Goal 11, but to all the goals except for Goal 14 (life below water).[2] Hence, all 16 SDGs should be considered while dealing with urban informality. Accordingly, efficient interventions that deal with this issue should respond to all the targets of the

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16 goals, which confirm the complexity of informality within the city. Informality is thus a subsystem in the urban system that cannot be dealt with separately.

When I embarked on writing this chapter, I wondered what specific topic should be raised about the informal city, since the existing literature that discusses and debates informality is dense and insightful. Authors and researchers from all over the world have touched upon many aspects in different regions, navigating high-level policies and strategies, and reaching local communities' level of action. Moreover, recent concerns and issues are being discussed, such as urban metabolism, resilience, climate change, and the most innovative tools and approaches for upgrading. Soliman argues that it could be possible to borrow innovative planning tools from the Global North and apply them in the Global South.[3] Moreover, in his most recent publication, he discusses the requirements necessary to achieve resilience and adaptability; the author states that shifts in urban systems should take place. He focuses on four modes of consumption, production, reproduction, and distribution of services in the city, concluding with an explanation of the ways in which urban informality transitions could be sustainable.[4] Informal areas will definitely remain a source of inspiration and a challenging experience for practitioners.[5]

Urban Informality—What it is and What it Represents

In many cities, informal areas or unplanned communities are dominating the urban scene, thus confirming their existence and their survival. Sometimes they can be productive and sustainable.[6] But are they vulnerable or fragile areas? They are marked by a strong socio-spatial conflict within the city, being marginalized and excluded by the formal sector.[7] However, nowadays they are seen as an integral part of the city landscape. The formal and the informal are slowly merging, creating a new type of urban context in cities and regions in developing countries, especially in the Greater Cairo Region (GCR) of Egypt. Informality in the city is reflected by multiple aspects including informal transportation, informal economy, informal services, and informal housing. Dovey adds other informal practices, especially in public spaces such as informal parking, informal markets, informal advertising, and begging.[8] Usually, all the informal features support each other. Accordingly, and due to the dynamism engendered by comprehensive informal development, informal areas are gaining more power and growth. As Jones states, the growth of informal areas is driven by myriad generic and contextual factors.[9] Safi Eldin argued that communities in Cairo are witnessing a paradoxical phenomenon in the relationship between formal and informal. She called it "A phenomenological conundrum," *or* "in-formalization," indicating that there has been some emerged behavior in Egyptian streets emphasizing this "them and us" phenomenon.[10]

Informality is also a product of the manipulation of land use, where local livelihood needs to govern spatial typologies. Despite their growing problems, communities living on informal properties often possess a number of resources that should be exploited and used as a basis for upgrading. They are often overlooked due to the types

of evaluation process and interventions in these areas. In fact, in contrast to formal housing, these areas are seen as unsafe, illegal, and high residential densities. They are thought to be suffering from spatial disorder, limited accessibility, insufficient primary public services, hazardous environmental conditions, lack of vacant open spaces, and poor infrastructure. Specifically, they are theoretically associated with urban poverty. According to Piffero, the expansion of Cairo's residential informality is not due to rising poverty levels, but instead has been fostered by a combination of deliberate policy choices and market dynamics that were not properly readdressed.[11]

Informal solutions offered the flexibility of acquiring land illegally within existing social and economic networks, or on the edge of the city, where livelihoods were easily maintained. Users do not generally react directly to policy interventions, but instead react to the "supply" that is presented to them.[12] In Cairo, the relationship between informality and poverty needs in-depth studies. It is assumed that the current trends show that the relationship between poverty and informality is not a straightforward relation.[13] Therefore, it is essential to stress that upgrading should be complemented by socio-economic measures that alleviate urban poverty. After all, urban informality is about spaces, communities, and places where residents adapt using their local rules and processes that are "outside" the structures and processes controlling the formally planned city.[14]

Unplanned Communities in the Greater Cairo Region (GCR)

Informal settlements or informal areas, illegal areas, slums or squatters are all terminologies describing a system of illegal actions that range from land squatting, or change of land use, to a developed, living informal community. Various studies categorized urban informality in Egypt according to typologies that differentiate their characteristics, such as type of land, the process of settlement, and location.[15] Conventionally, in Egypt, slums dwellers are offered alternative shelter through approaches that reshape and restructure the lifestyles of inhabitants to align with formal market measures, which has a major impact on existing disadvantaged communities.[16]

Unplanned areas are subject to various upgrading mechanisms based on their physical characteristics that determine which type of upgrading process they would undergo. Among the four types defined by Sims, informal housing on former agricultural land is the focus of this chapter.[17] Known in Egypt as unplanned areas, these are not just areas; they are rooted communities with a strong socio-economic identity. Their main problem is that they were developed without legal procedures, thus lacking primary services, infrastructure, public spaces, and governance. They emerged due to the significant decline of agricultural activity in Egypt. Accordingly, farmers were encouraged to sell parcels of land for a large revenue.[18] Selling land for residential use was more profitable, intensifying urbanization in rural communities. Here, informality stems from the sudden and illegal transformation of land typology, from agricultural, desert, or simply unplanned land, into residential land

Fig. 35.1. El Hagana squatted unplanned community

not accounted for in the national urban plan. Preparing for Quito 2016**,** UN-Habitat delivered the informal settlements issue paper, were defined as residential areas where residents have no security for land tenure. The paper considered informal areas and squatted areas similarly.[19] This is not the case in Egypt: unplanned communities are different than slums, which are considered more problematic and negative, while squatting can turn into a slum, or rarely, into an unplanned community.[20] The El Hagana area is a good example of squatted, unplanned communities on governmental desert land in Cairo. The area has neither primary services nor infrastructure networks. Figure 35.1 shows the unplanned community surrounded by planned communities.

However, the majority of unplanned communities are mostly built on agricultural land. Figure 35.2 shows the process of illegal construction in Embaba, an example of an unplanned community on privately owned agricultural land. The figure shows the beginning of the encroachment and development of the community.

Both Figs. 35.1 and 35.2 prove that while informal areas are considered a manipulation of land-use to fit immediate needs of housing, they are generally a people-driven process emerging out of the need for affordable shelter and commercial outlets. Urban form is in a state of constant redefinition and readjustment to fit urban function. Landowners are always looking for benefits, so if they cannot afford construction, they choose a land use that can provide small business opportunities for quick benefits, as shown in Fig. 35.3., where one can see a parking lot and a rentable sports field created by the residents of Embaba.

Fig. 35.2. Encroachment on agricultural land—Embaba—Giza Governorate

Fig. 35.3. Landowners responding to the needs in unplanned areas–Embaba

Characteristics of Unplanned Communities in the Egyptian Context

Unplanned communities are areas that have arisen in violation of the laws and regulations governing urban planning and building construction codes and standards. They are characterized by a high residential density of approximately 500 persons/acre.

Figure 35.3 illustrates different patterns of urban informality. Building heights range from 4 to 10 floors. Urban form is in constant redefinition and readjustment to fit urban function.[21] They provide a minimum level of safe housing, and require medium- and long-term development processes. According to the Presidential Decree No. 305 of 2008, clause 2 stipulates that the Informal Settlements Development Facility (ISDF) aims to enumerate, upgrade, develop, and set urban plans for unplanned areas, supplying them with basic facilities such as water, sanitation, and electricity.

During the past 20 years, international organizations and donors have searched for solutions for a better quality of life in unplanned areas. Initiatives, when compared to the size of these areas and the embedded problems (according to ISDF they occupy 158,000 acres spread in Egyptian cities), the major challenge being the lack of available vacant land to allocate primary services (health and education).[22] Other research and studies confirm that the exact size is not yet defined, especially in the GCR. They estimate that unplanned communities occupy approximately an average of 50% of the housing stock in Cairo. In other sources, the numbers range from 40 to 60%.

To find the best tools and programs to upgrade these areas, all involved actors need to understand these communities by navigating and exploring the origins of the settlement process, the location and its connectivity to the GCR, the sequence of growth, the economic status of residents, and the dynamics of evolution and expansion to prevent unreasonable actions, especially relating to physical planning. Despite the fact that the general conditions may seem similar in all unplanned areas, there are always aspects of intervention policies that can trickle down to other sectors, addressing urban development from the community scale to administrative policy scale.

According to the ISDF, the implementation of upgrading projects in seven unplanned areas in seven neighborhoods has been conducted by implementing sanitation works, paving, lighting, and fire taps serving about 247 thousand units; some projects are still in progress.[23] The author argues that the current upgrading interventions do not provide the integrated process that would impact the community and achieve expected transformations in quality of life. In fact, the upgrading process for unplanned communities has been long focused on physical upgrading, such as paving roads, providing potable water networks, sewage, electricity, and in many cases, rehabilitating buildings. Most of these interventions do not include maintenance and monitoring programs. Figure 35.4 shows pictures taken in an unplanned community in Giza governorate, where upgrading projects were carried out to pave the main streets, and in an inner local street, where poor maintenance impacted the sustainability of the project (Fig. 35.5).

Governments and local authorities must realize that the work of upgrading is not just physical; it is also about providing opportunities that may relate to social, economic, or cultural issues, or even the overall community system, both physical and non-physical. It is evident that these socio-economic interpretations had no direct association with physical form. The focus on physical characteristics failed to identify socio-spatial significance, which is important in evaluating available resources for development, as well as potential types of upgrading processes that could benefit the community as a whole. Looking at informality from a non-political
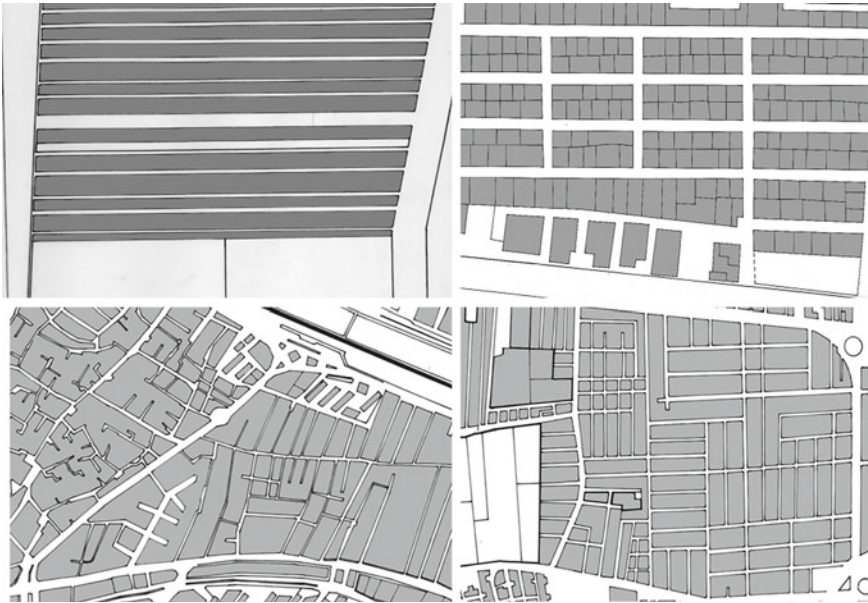
Fig. 35.4.   Urban fabric in unplanned areas

and non-geographical perspective, there are many aspects that should be considered as resources to be capitalized upon and strengthened in an upgrading approach. Classifications can be defined and set. However, the meaning is not necessarily significant, as a useful label depends on the context of the application of a typology rather than its physical configuration.[24]

Can Urban Nexus be the Right Path?

Government efforts to intervene in unplanned areas, especially in Egypt, have not revealed a solid path to transform unplanned areas into sustainable communities. Interventions, actions, and measures have not demonstrated a strong impact on quality of life. They did solve problems, but remained in silos, and a staggered process that did not integrate all sectors. Therefore, it is now essential to proceed with a comprehensive approach that foresees the unplanned community as part of the city complex system, including trade-off mechanisms, delivering an integrated vision that addresses all issues, negotiates public good concerns, defines hidden resources and potentials, and studies in-depth the post-operational stage. The project should be conducted within a framework at the macro-, meso-, and micro-level, depending on the typology of the community, its size, and the measures to be taken. Hence, the urban nexus concept may be the adequate approach to deal with unplanned communities.[25]

Fig. 35.5. Poor maintenance of upgrading projects in Giza Governorate

The "Urban Nexus" is defined as an approach that designs sustainable, integrated urban development solutions that promote changes in urban planning thinking, requiring the coordination and collaboration of different stakeholders in various fields. Stakeholders would identify possible synergies between sectors, looking at jurisdictions and technical domains to optimize resource management and increase institutional performance and service quality.[26] The nexus idea appears to be a key motive to meet the challenges of rapid urban growth. It responds to four issues: a stressed resource system, a growing population, the well-being and access of this vulnerable population, and securitization.[27] GIZ and ICLEI provide a comprehensive document explaining the urban nexus approach, suggesting a framework for practice and the delivery of key messages.[28]

The focus of most of the literature around the urban nexus is on water, energy, and food systems (WEF). The WEF seems to ensure the development of equitable, healthy, and resilient cities, focusing on ecosystem services that serve the inhabitants, thus achieving affordability, reliability, adaptability, and flexibility of the supply of WEF services.[29] Waste treatment systems are also included in the nexus concept. Lehmann links the circular economy with the discourse of urban systems. He thus developed integrated infrastructure planning approaches, increasing resource efficiency in order to achieve his aim. He argues that the Urban Nexus approach will

ensure a closer link between a circular economy and urban planning principles, providing an informed framework for defining trade-offs and synergies to meet future demand.[30] Dodman et al. explored the nexus between resource efficiency and resilience. He states that considering both agendas can help cities achieve significant co-benefits, arguing that tensions between both resource efficiency and resilience might exist; therefore, possible trade-offs should be considered.[31]

Solving the problems facing the food, water, energy, and waste sectors is insufficient in upgrading unplanned areas if they are considered separate from an integral urban planning process. If we agree with Velasco that the Urban Nexus considers that urban regions and cities are complex systems of connected subsystems including the ecological, legal, infrastructure, market, resource, community, and cultural systems,[32] then each Urban Nexus project should identify the relevant subsystems that will be impacted by the measures that will be taken. In the workshop held in Durban, Connective Cities, five main Urban Nexus innovation areas were identified: law and policy, institutional development, design and technology, delivery models, and communication and users' behavior.[33] Each of these areas forms a sub-system that can be approached to improve the city. Moreover, applying the urban nexus concept means introducing new management processes, which involves different modes of interrelated thinking while optimizing resource efficiency.[34] It is an approach that attempts to highlight synergies, as Hezri states that attempting to solve a problem in one domain can cause a problem in another. Therefore, we should avoid in silo planning: the nexus approach is useful to understand impacts and risks, enable actions, and engage decision-makers.[35]

Accordingly, the urban nexus may be the right choice to deal with unplanned communities if the framework is contextual and the subsystems are integrated, all while looking at the different sectors and their prevailing challenges. Figure 35.6 explains a proposed framework developed by the author to integrate all elements and subsystems related to the urban nexus concept, highlighting the various sectors that should be studied. The figure suggests 10 sub-sectors that could be interconnected to define synergies. This framework is also useful when considering how proposed measures in a project can meet these challenges. If well-adapted, the urban nexus can provide an effective tool for the upgrading process in unplanned communities.

Applying the Urban nexus in the Greater Cairo Region

In July 2018, the German Agency for International Cooperation (GIZ), in particular the Participatory Infrastructure Program (PIP), launched the upgrading project for unplanned areas in the three governorates of the Greater Cairo Region using the urban nexus approach under the title of Local Area Development Plan (LADP).[36] The project seeks to improve the living conditions of residents. It aims to provide an actionable plan through effective community participation, without the need to develop public policies or strategies at a higher level within cities and urban areas. In order to achieve the full effectiveness and success of this scheme, all planning
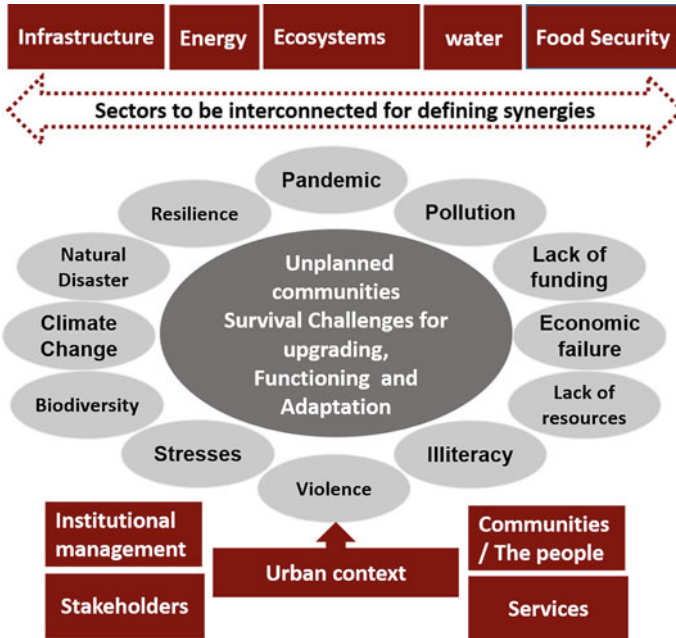
Fig. 35.6. Urban Nexus framework to achieve integral planning at the local level

dimensions must be taken into consideration, including legal, financial, procedural, and administrative. The Egyptian government, acknowledging the importance of this project in achieving the 2030 strategy, collaborated and facilitated the networking with authorities and stakeholders. Two study areas were selected as a pilot, then seven areas followed, and more work is expected in areas in other governorates.[37] The urban nexus approach was applied, focusing on improving resource productivity within the development strategy conceived by the consulting team. Resources were managed by their respective sectors (e.g., water, energy, agriculture, education).

The seven case studies in the three governorates have put this notion to practice by turning away from disintegrated planning, optimizing synergies between sectors through innovative integrated and cost-effective planning, and utilizing collaborative decision-making and implementation. In each community, boundaries were defined, including a buffer zone, to widen the possible impacts of the measures to be implemented. The process went according to the urban nexus methodology conceived by GIZ & ICLEI. The term of reference focused on infrastructure and services in order to select priority projects according to a set of criteria conceived by GIZ.[38] GIZ will provide the necessary funds to implement the projects in each governorate. The stakeholders agreed on a list of measures similar to a wish list that were prioritized using specific GIZ criteria. This was followed by a technical assessment based on another set of criteria that evaluates the significance of the urban nexus for the proposed projects, with a special focus on assessing the impact on development issues in the

community and its surrounding context. Further, the assessment evaluates to what extent the projects could be sustainable, along with their legal and financial feasibility. The urban nexus was used as a tool to identify the synergies and impacts of these proposed projects by clustering them; Figure 35.7 illustrates an example of clustering a set of projects that constitute a hot spot, or action area, in the city of Qalyub.

The main project outcome consisted of a GIS map clustering projects that included water networks, formalizing informal markets, paving streets, upgrading schools, and expanding health services. The clustering does not include non-physical interventions; an integrated approach would include poverty alleviation, awareness programs, cultural programs for women, youth, and children, and assisting small businesses and entrepreneurs.

The projects in these seven areas revealed important key messages and lessons: (1) The urban nexus approach is not an action plan; it is a multi-term document that provides short-, medium-, and long-term actions. (2) It is crucial to link hotspots to an integrated approach, highlighting synergies between hotspots, to ensure a comprehensive plan and effectiveness of the interventions. (3) The integrated plan should be a technical and financial tool. Therefore, it should be implemented in accordance with fiscal planning if funds are not available. (4) Managing the expectations of all involved stakeholders is important to ensure transparency. (5) A place for community meetings that has both the consensus of the government and accessibility of the local community should be identified from the beginning. (6) Confirming the opinion of Sperling and Berke about integrated modeling systems, approaches are needed that can identify potential trade-offs and synergies among sectors.[39] (7) Any upgrading project in unplanned areas should take the opportunity to set indicators measuring the quality of life and setting targets to improve it.

Conclusion

The problem of urban informality has been an ever-growing issue and topic for major research in various disciplines. This chapter raised a global concern about the future of unplanned areas, confirming the necessity to use new, integrated approaches. Revisiting the upgrading process is an urgent necessity, beginning with the establishment of a typology of unplanned areas. This typology should depend on three criteria: issues, challenges, and interventions. It is important to recognize that unplanned areas, despite their similarity physically, differ in their available resources and potentials: economic activities that can be developed, public vacant land, the state of the ecosystem, data availability, the status of services regarding availability, accessibility, and affordability.

The clustering of measures and actions has to go beyond physical aspects and include socio-economic and employment issues, favoring small businesses and entrepreneurship and considering residents' needs and priorities. While designing
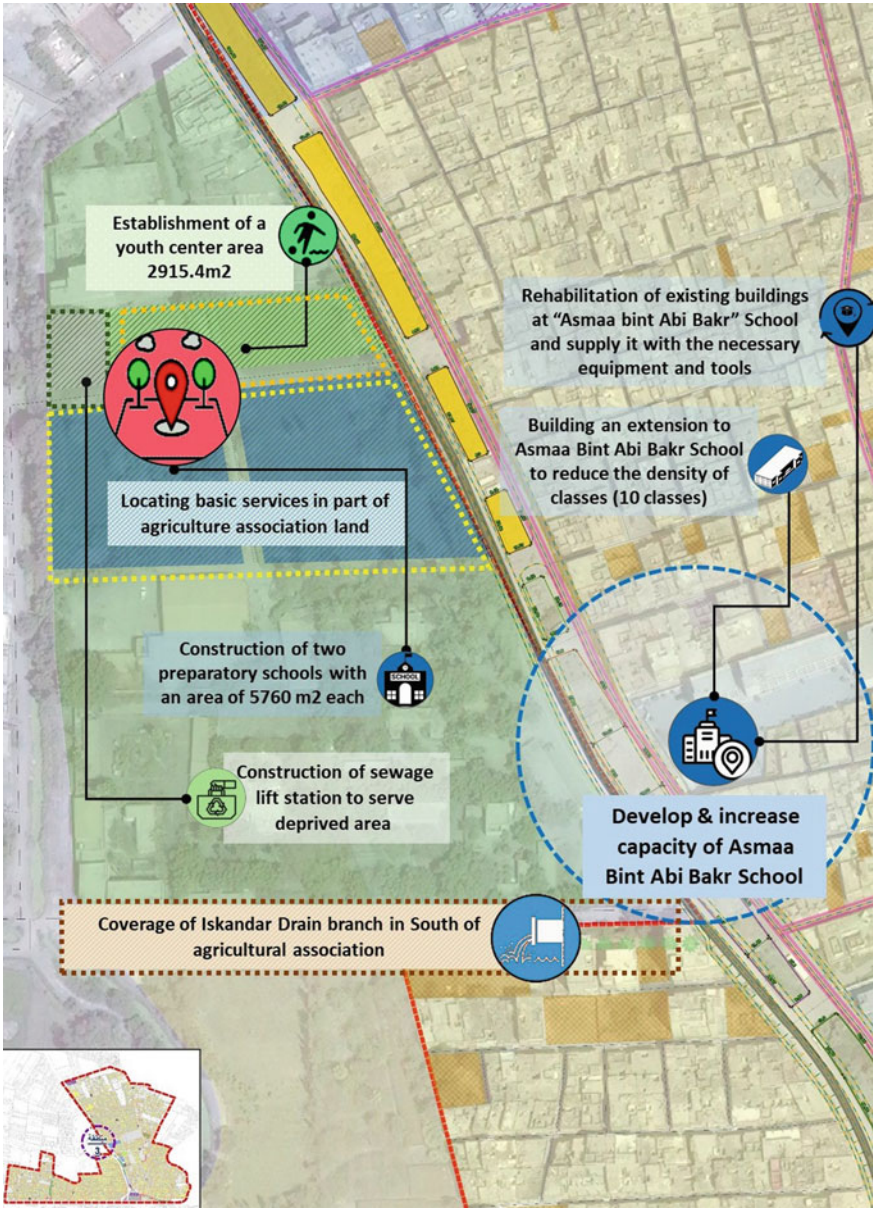
Fig. 35.7. Clustering projects for sustainable intervention

the upgrading program, synergies should go beyond the study area and its boundaries, capacity-building of local authorities should be considered, decision-makers' training is crucial, and quality of life indicators should be the main aim. Governance, management, and monitoring are three main pillars that play a vital role in the success of the upgrading and rehabilitation of unplanned communities. To make an effective change, there has to be more flexibility at the institutional level, where policies regulate urban productivity and ensure sustainability. Linking the LADP with strategic and detailed plans is required to facilitate this process. Governments that wish to achieve successful upgrading need to develop mechanisms at different levels, as shown in Fig. 35.8.

We must recognize that informal urbanism's capacity to produce innovative, culturally sensitive, and adaptable solutions that meet the needs and challenges is still underexplored.[40] As I mentioned, working in the realm of informal settlements and unplanned areas is inspiring, as with every area and every project, I discover that there are still hidden potentials in this urban typology: the dynamism, the size of the population, the size of communities, the variety of patterns, all these elements encourage practitioners to work on issues in informal areas.[41] Upgrading unplanned areas will impact the planned areas and will achieve inclusion and citizens' welfare.

Egypt's urban system as a whole needs to change from a bureaucratic system that's based on conforming to rules and regulations to a management system based on problem solving and achieving long term sustainability goals. Furthermore, a shift in the current urban administrative thinking requires a new set of role definitions to achieve a decentralized institutional system. This shift is a long-term process that

Fig. 35.8. Linkages between planning levels

requires a strategic capacity-building policy at national and local levels to increase capabilities on all administrative scales. Retrofitting large-scale infrastructure after the settlement has occurred can be more expensive than investing beforehand. Rather than reactive, policy needs to become proactive.[42] While governments are still trying to find solutions for urban informality, the current crisis due to Covid-19 aggravates the situation. It is difficult to anticipate the impact of this pandemic on the future of these areas. There is still a lot to understand, and a lot to achieve, for slums and unplanned communities.

Endnotes

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Chapter 36
Power Relations and the Influence of Cultural Factors in Cairo's Ashwa'eyat– Informal Settlements

Hassan Elmouelhi

Abstract Cairo's informal settlements—ashwa'eyat—are more established and of better quality than what the term "slums" suggests elsewhere in the Global South. Power relations play a crucial role in defining the inner dynamics of everyday life, especially in the use of public space and the overall development of the area. This chapter argues that power relations within certain communities could be better understood by analyzing community dynamics and considering certain cultural factors, namely origin, religion, relation to urban society, and relation to urban economy. Power relations are examined through the use of urban space in three informal settlements in Cairo, Ezbet el-Haggana, Ezbet El-Nasr, and Istabl Antar, the three of which display two similar distinctive characteristics, being built on former desert government-owned land and inhabited mostly by migrants from the same origin—Upper Egypt. This chapter proposes that understanding power relations through the lens of cultural factors would help decision-makers (i.e., governmental entities and international cooperation organizations, among others) to better guide and enable community development processes and achieve more appropriate decisions regarding urban development interventions.

According to several scholars, the physical structure and scale of Cairo's informal settlements (ashwa'eyat) set them apart from other informal settlements in the Global South (Fig. 36.1).[1] The majority of Cairo ashwa'eyat are well established with concrete and brick buildings that have several stories. Many of those areas represent hundreds of thousands of inhabitants, reaching around one million residents in some cases. The term ashwa'eyat (meaning haphazard in Arabic) refers to the fact

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Fig. 36.1 Aerial view of Istabl Antar informal area (in the middle right part of the image), showing its relation to other formal areas in Cairo. *Photo* Hassan Elmouelhi

that the initial establishment of these settlements was not the result of a state planning process nor approved by the state.[2]

The legal frameworks of Cairo's ashwa'eyat vary from case to case. Although building permits may not have been issued in some areas, ownership of agricultural land could be regarded as legal. In other areas with no clear legal ownership status, the state has provided infrastructure, endowing the area with a quasi-legal status. In that regard, according to the Informal Settlements Development Fund—ISDF—informal settlements in Egypt are mainly divided into two categories. The first category is unsafe areas (slums) that have poor physical conditions and form only around 1% of the total area of informal settlements in Egypt.[3] The rest are called "unplanned areas," forming around 60–70% of the Egyptian urban scene, according to the ISDF categorization based on law 119 of 2008, which in general are well-established areas, with higher density and a higher number of inhabitants.[3,4]

However, the functioning of Cairo's informal settlements is best understood not only by examining their legal frameworks or physical conditions—where socioeconomic services are insufficient to the respective density—but also by considering the community-level interactions and interpersonal dynamics at play, more specifically the power relations that exist within a given community.[5] Commenting on Cairo's informal areas, Gerlach notes:

> So many of us are quick to believe people living in some of Cairo's poorest informal areas are destitute and miserable, that we lose sight of the importance of community and bonds between people that actually make them happy and even healthy.[6]

Hofstede's notion of "power distance" is a useful starting point in examining how Cairo's ashwa'eyat communities are organized. According to Hofstede, whereas people in societies that exhibit a large degree of power distance accept a hierarchical order in which everyone has a place, in societies with low power distance, people seek to equalize the distribution of power and demand justification for inequalities.[7] In that regard, it can be argued that there are a number of mechanisms or subsystems in cities, according to Herrle, those mechanisms often:

> "organize and secure the (unequal) access to services and the (unequal) distribution of power. Depending on the political system, economic conditions, social and cultural traditions, effectiveness of the administration etc., there may be countless variations in how the result is achieved, but in most cases, there is a constant process of negotiation".[8]

Power Relations and Daily life in Cairo's Informal settlements

Local social structures and processes play an important role in the daily life of the so-called ashwa'eyat residents. This can be justified due to the fact that the local level (micro-level) is the main arena of action for residents, including poor and vulnerable groups. Particularly in vulnerable areas with ambiguous tenure-ship status, they are left to their own self-help devices against internal and external power struggles or threats.

Such power struggles, conflicts, or negotiations often occur between different groups of residents, with different origins, different religions, and professions, including local authorities represented by government officials, local religious leaders, local civil society organizations, business owners, and family leaders. This is either to ensure domination over the area or to make sure things remain under control. These negotiations differ in their form and dynamics from one area to another. The rate, direction, and form of the area's development or growth along the years, which is called unplanned urban development, might differ from case to case as well. Understanding power relations could help us understand the development process as a whole, for the sake of the residents.

According to Harders, poor and vulnerable segments of society—in this research, the segments of the so-called ashwa'eyat residents—are to an extent dependent on the state and its institutions. Local power relations and structures reflect and stabilize the national political system and constitute the most critical space for the distribution of material and normative resources.[9] There is an evident inequality in the distribution of services in ashwa'eyat, compared to other planned areas. According to Hofstede, in a study that includes Egypt, his research shows that Egyptians have a larger power distance and a lower individualism in this regard. As this study measured power distance and individualism, it claims that power distance:

> …defines the extent to which the less powerful person in society accepts inequality in power and considers it as normal. Inequality exists within any culture, but the degree of it that is

tolerated varies between one culture and another. All societies are unequal, but some are more unequal than others.[10]

In the context of Cairo's informal areas, the relationships between power relations and informal urban development were tested (Fig. 36.2).[11] The research uses specific cultural factors to analyze the power relations among the so-called ashwa'eyat residents in relation to the use patterns of urban space and the informal urbanization process. The central question is as follows: How can the power relations between local groups of residents within the informal settlements be understood through the studied cultural factors? The empirical research depended on fieldwork in the three studied informal settlements mentioned above, using qualitative methods including interviews, semi-structured interviews, focus group discussions, observation, and participatory observations.

The findings of this research show that there are certain mechanisms that are used by local CBOs and local NGOs to first build and/or sustain their urban habitats which play an important role in the area's governance. Power relations within Cairo's informal areas are a product of the interactions of the existing constellations of cultural factors that result in the prominence of certain factors. Such factors determine which values will be upheld in certain situations and time frames. In

Fig. 36.2 The gap distinction between the formal planned and informal unplanned areas in Greater Cairo region—Location: Monib axis, Giza. *Photo* Sandoval

other words, power relations would change simultaneously with the constellations of cultural factors and the prominence of certain factors over others. This creates certain powers for some individuals (usually called in the development organizations discourse "natural leaders"), or even groups, leaving the rest of the residents more vulnerable. This change, in turn, affects the use of space and the whole process of urban development. To clarify this, each of the chosen cultural factors should be defined and explained in relation to power.

Re-defining "Culture" within Cairo's Ashwa'eyat

In this part of the chapter, the researcher constructs and adopts a certain definition of culture to be used in the context of informality based on different definitions. Culture is defined as values, norms, and rules,[12] that act as controlling mechanisms that govern behaviors.[13] Unpacking culture into cultural factors is also adopted in this study.[14] The researcher has gone through discussions with academics from related disciplines (e.g., political economy, sociology, and political science) to better understand this concept. The relation between the formal system (represented in states and governments) and the informal system (represented in the illegally built informal settlements and their residents) is important to grasp for a better understanding of urban informality. Culture contributes to shaping informal urban development processes through variables such as ethnicity, religion, class, and income.[15] AlSayyad defines culture while addressing urban informality as a broad system of values and norms that mediates relations among the urban poor, and between them and the state.[16,17] Assuming that culture is responsible for values and norms, origin and religion could easily be considered as cultural factors. In addition to this, two important factors are considered based on the relation of those migrant communities to their new destination of the city: the relation to urban society and the relation to urban economy.

In this context, the residents' origin—as a cultural factor—is the first source of power within the community's structure, which in this case mostly belongs to different villages or cities from Upper Egypt, characterized as a conservative subculture that emphasizes the importance of the traditions that give the family leaders authority over extended family members.[18,19] Such family-authority structure in rural Upper Egypt transfers to the ashwa'eyat areas during migration.

The second cultural factor, religion, provides certain power to religious leaders when it comes to urban governance, in addition to political practices during election periods, as was found in Cairo case study areas. The interviews revealed that religious leaders (Muslim and Christian alike) have a say in several issues related to problem-solving and providing services and financial aid to low-income families. They might direct the residents to vote for specific candidates, or agree or disagree to a referendum.

Third, considering the relation to urban society as a cultural factor, power relations within ashwa'eyat areas are partially linked to the source of power outside the area, in the formal system. An important aspect of formal–informal relations is the need

for certain people who act as mediators between the resident's needs and the formal system. This has been found in the three areas of Ezbet el-Haggana, Ezbet El-Nasr, and Istabl Antar (Fig. 36.3). These mediators have connections to state officials by being either members of the ruling party, the National Democratic Party—NDP (e.g., Hassan–Ezbet El-Nasr)—or on good terms with one or more of its members (e.g., Khaled–Istabl Antar and Hag Abdou–Ezbet el-Haggana).

Forth, the relation to the urban economy as a cultural factor that shares in shaping the power relations in ashwa'eyat can be seen in the financial assistance channeled through the NGOs that helps them to wield a certain amount of power over individuals and families that receive that assistance. Also, business owners have a certain amount of power over those who work for them.

Comparing three men in the three areas, it could be observed that the three of them have several common characteristics: they are managing NGOs and providing financial assistance to poor families among the residents, in addition to other services (e.g., education and health) to their area's residents, which consolidates their power within the neighborhood. In these studied cases, there can be more than one cultural factor combined to provide a certain amount of power to certain groups or individuals. This can occur in this case through (a) managing a community-based organization, (b) direct financial assistance to the most vulnerable, and (c) provision of other community services that consolidate position/power, as shown in Fig. 36.4.

Fig. 36.3 A group of Upper Egyptians in the Ezbet El-Nasr area, celebrating the visit of parliament candidates before the elections of 2012. *Photo* Hassan Elmouelhi

	EZBET EL-HAGGANA			EZBET EL-NASSR			ISTABL ANTAR		
Person	Hag abdou			Hassan			Khaled			
AFFILIATION	NGO (religious)			NGO/former LPC-NDP			NGO (religious)			
CULTURAL FACTOR (S)	Relation to Urban economy	Relation to Urban society	Religion	Origin	Relation to Urban economy	Relation to Urban society	Origin	Relation to Urban economy	Relation to Urban society	Religion

Fig. 36.4 Comparison between the three informal settlements showing the cultural factors as a source of power within the three areas. *Author* Hassan Elmouelhi

Istabl Antar is the poorest of the case study areas in terms of its economic conditions. This was personally observed through the fieldwork, namely by regarding physical conditions. It is weakly connected to the city, with less accessibility through the ring road. This explains how powerful Khaled is as a natural leader in comparison with the leaders in the other two areas. The NGOs' role as stakeholders in the area does not always support the process of development. In many cases, they claim that they are working in development, although they are acting as charity organizations, giving financial assistance or food, which can be considered as temporary "pain relievers" to some low-income residents. They do not motivate the residents to improve their situations, capacities, or even their physical conditions. They play a political role in controlling the most vulnerable groups.

Based on the case study analysis, it is proven that in that context, power relations between local residents usually depend on the relations between the groups to which they belong. This leads to discussing the concept of homogeneity versus heterogeneity. It mainly depends on the nature and relation between the existing groups of residents (e.g., Upper Egyptians, Cairo residents from other districts, and rural Delta migrants). Moving to ashwa'eyat is a decision taken by different people for different reasons mostly related to their needs, which are fulfilled (or partially fulfilled) by the area and the benefits that could be provided by the area's urban characteristics at the time of their move. Newcomers to ashwa'eyat and their level of integration within the existing residents' informal system could be perceived as a way in which the formal meets the informal, as those who move to ashwa'eyat later usually come from Cairo middle-class formal districts, as this provides them with an affordable housing solution.[20]

A power struggle could erupt between individuals, each trying to impose their own rules and engaging in a compromise as the best means for finding a way out of problems. I would argue that the power obtained by certain entities or person(s) is defined according to the prominence of certain cultural factors in a certain situation or interval of time. This status changes according to the change in situation, which implies a change in the cultural factors' order of prominence within the constellation.

A clear example of this is what happened after the January 2011 revolution, as a barely understood change in ashwa'eyat has taken place.[21] This event led to the alteration of power relations within the ashwa'eyat's different groups, a direct reflection of the changes that took place on top political levels. The collapse of the former ruling party, the National Democratic Party, and its president, who was the president of the country for 30 years, has suddenly pulled the power away from all NDP members who were controlling many of the States' operations. In previous years, many of the participatory urban development attempts by international cooperation entities (e.g., The German Agency for International Cooperation, GIZ) was considering the members of the local popular councils as important, active stakeholders at their locales, as they were the most powerful entities in ashwa'eyat due to their relations with the ruling party. This dramatic change reached the local neighborhood levels in both informal and formal areas, and this was reflected in the local power relations.

Later on, after the election of Mohamed Morsi (representing the Muslim Brotherhood) as president in mid-2012, all the local NGOs that had an Islamic tendency gained new powers due to their relationship with the Muslim Brotherhood. This went on for a short period of time, ending with Egypt's second revolution on June 30th and the ousting of Morsi.[22] Although this chapter is not focused on the period that has followed 2013, it can be argued that power relations within the three studied informal settlements have changed as a consequence of changes in the political scene, with the new roles of the armed forces, and the new parties that have been founded.

Power Relations and Use of Public Space

Based on the research methodology, power relations are examined in this context through the use patterns of urban space. In all three case study areas, I noticed that there are different values and reactions controlling what is acceptable and what is unacceptable in others' behavior. The power struggle between groups is reflected in the process of regulating the usage of space, in other words, deciding who uses which space and when. The size of the used space usually reflects the amount of power of its user(s); the bigger the size of the space is, the more power the user(s) prove to acquire. For example, the size and the location of the space used for a wedding ceremony reflect the economic status of the family whose wedding it is, and the amount of power they have. This is a temporary use of the space, as in some cases, weddings can lead to the blocking off of an entire street (Fig. 36.5).

On the contrary, the daily use patterns of public spaces demonstrate the amount of power they have, along with the territories of that power. As a part of the research findings, some examples of residents' different feelings and reactions toward others using the same space include tolerance, refusal, anger, acceptance, fear, understanding, cooperation, and sharing. Usually, the reaction depends on who the other users of this space are. In a situation that can be characterized by an almost complete absence of formal control from local authorities and minimal external control, several common

Fig. 36.5 A setup for a wedding ceremony in one of Ezbet El-Nasr streets, as an example of the patterns in informal settlements. *Photo* Hassan Elmouelhi

patterns were noticed from the case study areas: workshops/neighbors (noise tolerance), shops/car parking (fights that sometimes break out between newcomers and long-standing residents), construction materials blocking streets, and the disposal of garbage (usually tolerated, but can sometimes cause problems between neighbors). Moreover, selecting the way in which a public space is used usually depends on the relations between the residents, or the groups to which the residents belong (the wedding celebration, for example). This might also include how an urban space is informally perceived by the community members as a changeable temporary property to the residents: public, semi-public, semi-private, or private, which needs further research.

The family business is one of the main micro-economic pillars in the three case studies of informal settlements in Cairo: Ezbet el-Haggana, Ezbet El-Nasr, and Ezbet EL Nakhl. In such business relations, the use of urban space is important, as usually some part of the business takes place in the street (e.g., as a working place, or as a storage place for the work equipment and tools). Business owners, who are family leaders at the same time, are intrinsically more powerful in regard to decisions about the use of urban space. Power relations are subject to change on the level of urban development. One factor could be who has the ability to serve residents at a certain period of time.

Conclusion

To conclude, power relations play a crucial role in informal urban development. At a certain interval of time, different power relations within resident groups are shaped according to the order of prominence of cultural factors, as well as in response to certain urban physical characteristics. Informality practiced in each of Cairo's ashwa'eyat areas is the outcome of negotiation processes that take place on different levels: the highest is the struggle between the "state" and the "residents" of ashwa'eyat citizens, or between them and the residents of formal districts. Another level would be between different residents in the same area (e.g., groups based on different places of origin, religions, or professions). From those levels of power struggle, we can learn that when addressing the residents of an informal area, it is not appropriate to address them all as one group.

Informality in the form of urban development is related to a great extent to the practice of power, mainly power relations between different residents' groups, different individuals, and the power struggle and negotiation between formal and informal systems. I would argue that cultural factors play a role in the definition of power relations. Along the same lines, I argue that informality and formality are two different but interrelated systems; they meet and deal with each other on different levels and in different ways. Informality is indispensable from formality in the Egyptian urban scene, as each is based on the existence of the other. Without the existence of a formal system, it would be impossible to define what is "informal," and vice versa.

Culture in relation to informal urban development needs more attention. Dealing with residents of ashwa'eyat without understanding cultural factors could lead to an unsuccessful development project or a project with limited success and potentially many obstacles. Due to the complexity of the matter, dealing with the different local groups of residents without knowing the power relations between them could negatively affect the credibility of the project. In the process of choosing contacts and establishing connections with the community in the ashwa'eyat targeted for intervention, the selection of the key persons and NGOs/CBOs should come after an investigation of the relationship between those NGOs and the community.

Analyzing power relations within ashwa'eyat is important, although complicated. This analysis leads to an understanding of the different stakeholders engaged in the ongoing process of informal urban development in ashwa'eyat. Also, power relations depend on the qualities that already exist, such as social cohesion among the residents represented in tight family and neighborly networks. Hence, intervention through projects might disturb the "naturally" existing power relations in an area, which can be accepted only in the case that it is done consciously. For example, when dealing with an area through a certain NGO, the people of this NGO get more power than they already had before the intervention, which shows a need for sensitivity in that process.

Governmental classifications of each area and its decided interventions (e.g., upgrading, eviction, etc.) influence the area's urban development. I propose that each area should be treated differently after studying its cultural factors in relation to

its power relations, and in respect to the urban development process. This knowledge should be available to local authorities and provided to decision-makers at higher levels so as to link it to regional and national strategic planning.

In the preparation phase of urban interventions in informal settlements, or similar vulnerable areas, the "Who?" question should be asked first to identify and define the different types of residents who manage and act within the daily life of the studied area. Following the first question, two further questions should be posed and answered: "Why are they doing it that way"? And "What rules control the mechanism of daily life"? By answering those questions, it would be easier to direct the intervention decisions toward what people really need in a way that they can implement and sustain. All the gathered qualitative data could be used to understand power relations based on cultural factors within the studied area. The criteria for judging the existing informal system should not only depend on external sources (e.g., regulations, laws, or perceptions from the formal system or from international development agendas). It is advised to first refer to the values on which residents depend to judge their lives and priorities. This could lead to developing area-specific guidelines, the *dos* and *don'ts* for decision-makers involved in the intervention.

In development projects that target ashwa'eyat, a developer that belongs to the formal system (international cooperation or governmental body) usually needs to deal with local formal entities (e.g., NGOs), which do not necessarily represent the area's residents. On the contrary, many examples demonstrate that residents could cooperate in developing their area without assistance from NGOs or government, based on their needs and their ability to organize themselves.

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Chapter 37
Obscured Innovations? Inventiveness in Collective Infrastructure Management in Accra, Ghana

Seth Asare Okyere, Stephen Kofi Diko, Mowa Ebashi, and Michihiro Kita

Abstract The discourse on urban innovations is largely positioned in the Global North, often conceived within the entrepreneurial and managerial forms of high-tech services and products. Unfortunately, the socio-spatial configuration and transformation of urban spaces by residents of informal cities in the Global South, particularly in Sub-Saharan Africa, are mostly left out of the urban innovation discourse. They are rather conceived by such nomenclature as primitive, chaotic, survivalist, and illogical. The myriad ways in which residents of informal cities confront their urban challenges and the granular forms of inventiveness in their everyday urban experiences are often ignored, subjugated, and obfuscated. This chapter argues that urban innovations are embedded in residents' inventiveness, which offers important opportunities for co-producing methodologies and mechanisms for inclusive and sustainable urban transformation. This chapter, therefore, unravels the socio-spatial constructs that underpin the specific collective mechanisms of infrastructure management in an indigenous informal settlement in Accra, Ghana. It demonstrates residents' orderly and logical inventiveness in collective water and sanitation infrastructure provision and management as a form of urban social innovation. These efforts can undergird a didactic approach for planners and policymakers to co-produce socio-spatial configurations and transformation of informal cities inclusively and sustainably.

Keywords Informal settlements · Community-led initiatives · Social innovation · Indigenous areas · Accra

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Africa, together with Asia, accounted for more than 80% of the global urban population growth between 1990 and 2018. This pattern is expected to continue until 2050, culminating in an urban population of 1.4 billion people.[1] Although significant variations exist across individual countries, it is widely acknowledged that current urban planning practices, structural deficiencies, and the pace of critical infrastructure and housing provision fall far behind the rapid rate of urbanization.[2,3] In 2019, about 47% of Africa's urban population resided in informal settlements. Housing conditions are mostly structurally weak, and basic infrastructure, such as piped water,[4] drainage, and paved roads, is often in poor condition.[5,6] Given the socio-physical and economic deficiencies already present in most African cities, the expected growth in urban population would be accommodated in informal settlements. Yet the potential role of informal settlements in traversing existing and emerging urban challenges is often side-lined.[7] For the most part, state authorities often evoke the language of "illegality" or "deplorable conditions" to either brutally demolish settlements or conveniently ignore them—practices often implicated in the shifting geographies of informal settlements across inner and peripheral areas of the African urban landscape.[8,9]

A similar situation can be observed in Accra (Ghana),[10] where a UN Habitat inventory in 2011 revealed that there are about 78 informal settlements, accommodating 38% of the city's population. Informal settlements in the city take diverse forms socio-spatially, including indigenous, migrant, and mixed informal neighborhoods.[11] Although evictions in the city are sporadic rather than entrenched as in other African cities, marginalization of informal areas, state ambivalence, and socio-political narratives that blame informal residents for all forms of urban calamities (e.g., floods, crime, fires, etc.) is deep-rooted.[12] The marginalization and neglect of informal settlements have spurred residents to either invent initiatives in order to confront existing deprivations or resign to perpetual impoverishment.[13] Thus, it often falls on individual residents and community organizations to address deficiencies and challenges through incremental improvisations and social collaborations.[14,15]

Scholars working in cities in the Global South have included such residents' collective and community-centered practices in the discourse on social innovation.[16] Geoff Mulgan[17] defines social innovation as an idea for meeting specific social goals. Phills, Deiglmeier, and Miller extend this idea to include products, production processes, or technology.[18] Manzini adds that social innovation encompasses a multiplicity of practices and scales that fundamentally involve a process of change that emanates from the creative recombination of existing assets to achieve specific social goals, often in new ways.[19] These assets may include social capital, historical heritage, traditional craftsmanship, and technological access. Social innovation creates new social relationships or collaborations to enhance society's capacity to act. Here, innovation emanates from the collaboration it fosters toward the social good.[20] While different factors contribute to the activation and diffusion of social innovation practices, contemporary social crises resulting from market failures and ineffective government policies are key prompts.[21,22]

Examples of socially innovative practices that address critical infrastructure deficiencies in informal cities in Africa include community-led provision of sanitation blocks,[23] community waste disposal technologies,[24] collective financing for housing

and home improvements, and street-based improvements.[25,26] These community-centered initiatives are part of the ongoing socially innovative practices in African cities. However, most studies on this topic focus on informal areas with formal community-based organizations (CBOs) or international alliances (e.g., network of slum dweller federations). As a result, indigenous areas with non-formalized organizational or traditional systems are underexplored in the literature. Specifically, indigenous areas, whose fluid socio-spatial patterns are underpinned by organic processes that defy the highly criticized binaries of the formal and informal, have their everyday collective practices and activities pushed "out there" in the political and social imaginary spaces of the unplanned.[27]

Against this background, this chapter unravels indigenous informal settlements' creative reorganizing of available resources to address water and sanitation deficiencies in an informal quarter of La Dade Kotopon district in Greater Accra. In so doing, it contributes to the everyday granular ways of urban life in the African city and helps restore visibility to the unseen and the unspoken dynamics of indigenous areas and their processes of inventiveness.[28,29] Thus, it offers insights into the particulate aspects of "southern urbanisms" necessary for co-learning and co-producing sustainable and inclusive communities.

Abese Old Quarter: Location and History

Abese old quarter, the study area, is well known to the authors who have engaged with traditional authorities and community agencies in the area since 2015. The Abese quarter forms the historical core of the La township of Accra. Together with eight other quarters, it constitutes the "old town" of the La Dade Kotopon municipality (LaDMA) of the Greater Accra Metropolitan Area in the Greater Accra Region (Fig. 37.1). Unlike squatter or migrants' settlements in the inner city of Accra, this is an indigenous settlement composed mostly of Ga people who are native to the Greater Accra Region. The majority of residents belong to the La subgroup of the Ga ethnicity, who trace their origins to a common ancestor.

Oral and written historical accounts reveal that the settlement was established around the seventeenth century, when the original settlers were given the land by the traditional leadership of Osu (a nearby settlement and former host suburb of the British Colonial Government of the then-Gold Coast, present-day Ghana).[30] Under the custodian of the original settlers' traditional leader, the land was distributed among 15 clans who later self-built their houses, commonly referred to as clan houses. Clan houses are compound or courtyard houses that are multi-habitation units of different families belonging to a specific clan. These houses are predominantly old, mostly single-story, made of mud or stone walls, wooden windows, and asbestos or tin roofs. Although the original clan houses remain in their original form, most are undergoing material changes and modifications. Building transformations accommodate increasing population mostly by horizontal and vertical extensions to
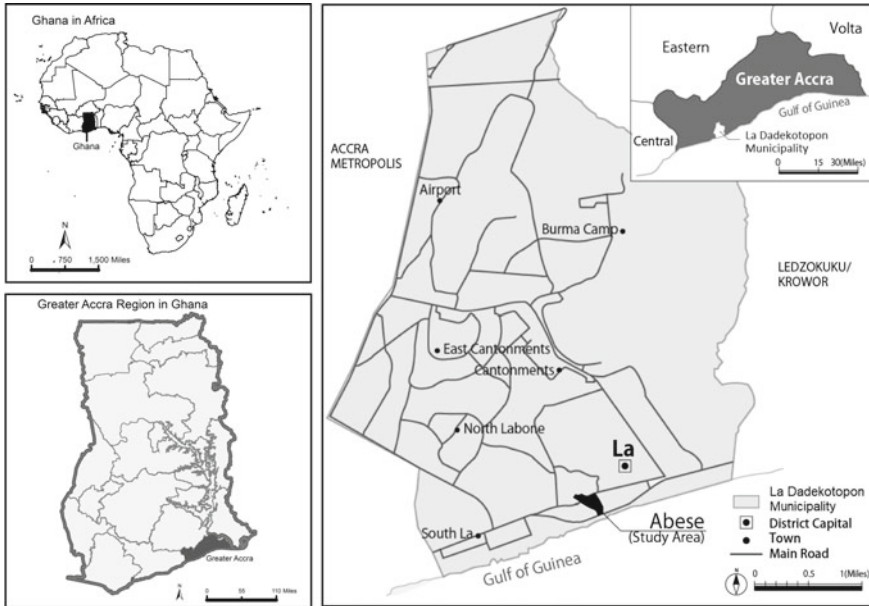
Fig. 37.1 Location of study area in national, regional, and district context. *Drawing* Okyere, Diko, Ebashi, Kita

existing houses or entirely new constructions of materials such as concrete walls, glass windows, and aluminum roofs.

The Social Collective of the Indigenous and Informal in Abese Quarter

Indigenous Social Deliberative System

The Abese quarter is largely self-built, and the provision of basic infrastructure relies on residents' mobilization and collective activities, given local authorities' inability to provide adequate infrastructure. The community's social system, organized around traditional leadership (divisional chief) and a clan system (clan heads and inhabitants in clan houses), is still maintained. Population growth in the settlement has increased the demand for basic infrastructure services. In response, residents utilize existing social capital, strong attachment to the community, and customary arrangements of community organization to continually address basic infrastructural challenges.

Collective decision-making revolves around inhabitants of each clan, who organize weekly meetings to deliberate challenges and solutions. This subsequently feeds into a community representative meeting, composed of leaders from each clan house

Type of Meeting	Clan-based meeting	Community-wide representatives meeting
Schedule	Sundays	Thursdays
Participants	Residents of each clan house; members of the clan but residing outside the community	Chief, community elders, Representatives from each clan house (2), heads of designated groups (e.g., women, youth)
Purpose	Identify and discuss socio-physical issues relevant to the clan and its relationship with the wider community	Reports from each clan, harmonisation of clan issues and community-wide development issues
Themes	Housing and related services, social support, and regulations	Community infrastructure provision and maintenance, neighbourhood planning and management

Fig. 37.2 Deliberative decision-making system. *Authors* Okyere, Diko, Ebashi, Kita

(clan leader, secretary, and treasurer) who organize issues coming from each clan and harmonize them into a community-wide agenda, devising specific arrangements for addressing emergent issues around housing and infrastructure improvements (Fig. 37.2). The traditional leaders (chief, elders, and opinion leaders) finally discuss and approve these measures, taking into consideration available resources (e.g., land, money) and technical expertise.

Condition of Water and Sanitation

Like several informal settlements in the city, the existing water and sanitation conditions are both precarious and improvised. Tap water (provided by the Ghana Water Company Limited, GWCL) and private water tanks are the main sources of water. In view of the congested nature of the settlement, water tanks are strategically positioned along alleys or open spaces to ensure some form of accessibility for the residents. Originally, the clan houses were built without toilets or bathrooms. These were later provided as shared facilities located outside of or attached to main buildings (Fig. 37.3). Open drainage channels of large and small sizes typify the sewerage condition. However, with time, residents have resorted to improvising drainage by laying pipes (either buried or over ground; Figs. 37.4 and 37.5) from houses to open gutters along the streets. The municipal authority's limited presence in the area is shown in the provision of main sewers and public toilet facilities.

Collective Infrastructure Management in Abese Quarter

Resident-led innovations addressing their water and sanitation challenges are evident in four aspects, namely: provisioning, financing, construction, and maintenance. The nature of these innovations is presented in detail in the subsequent discussions.

Fig. 37.3 Distribution of water and sanitation facilities. *Authors* Okyere, Diko, Ebashi, Kita

a) Toilet detached from house   b) Bathroom attached to house   c) Tank for water storage

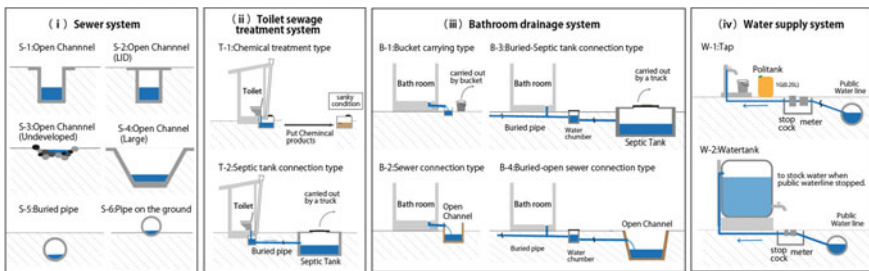**Fig. 37.4** Sewage and drainage conditions. *Photos* Okyere, Diko, Ebashi, Kita

Fig. 37.5 Water and sanitation infrastructure systems. *Drawing* Okyere, Diko, Ebashi, Kita

Provisioning

The community's provision of water and sanitation facilities is organized around a hierarchical, collective, and deliberative system of decision-making undergirded by
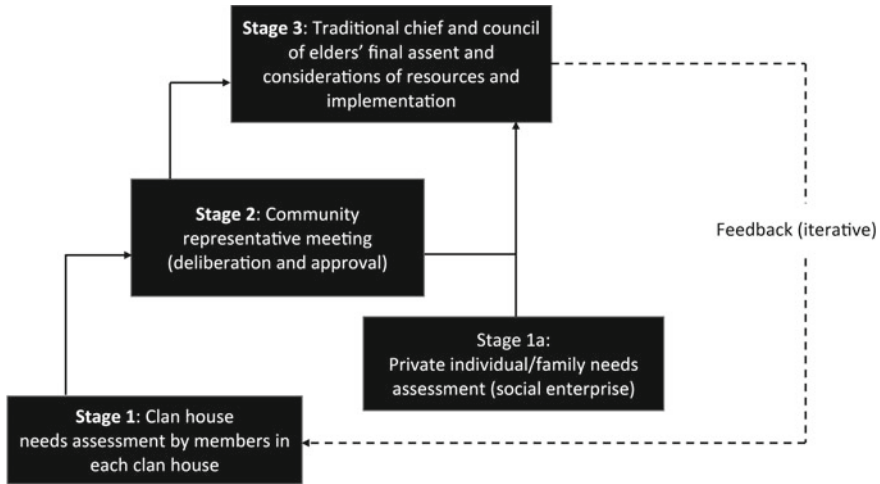
Fig. 37.6 Indigenous process of decision-making for water and sanitation infrastructure provision. *Drawing* Okyere, Diko, Ebashi, Kita

the existing indigenous social system and structure (Fig. 37.6). First, residents in clan houses identify a need and discuss its priority among other needs during the weekly meeting (held every Sunday morning). This is forwarded to the community representatives' meeting (held weekly on Thursday evenings and including representatives from each clan house), who must further deliberate, approve, and discuss the appropriate requirements of financing a mechanism of construction and maintenance. There are occasions when private individuals (or a family) may identify a need, proposing to provide it as a form of social enterprise where the facility serves members for lower than the market price. In such cases, the community leaders have guidelines where labor must be provided by youth or artisans, and local materials must be used as much as possible to reduce cost and ensure affordability.

Financing

Financial mobilization difficulties often hinder the provision and maintenance of water and sanitation facilities in the quarter. To overcome this hindrance, residents of the Abese quarter generate funds through diverse means, namely: clan funds, donations, and private (individual or family ventures as social enterprise). Clan funds are based on mandatory monthly contributions made by residents, based on households, to a community fund (Fig. 37.7). Each resident is required to contribute a minimum of three Ghana Cedis (3 GH₵).[31] However, residents may contribute more than the defined amount as the socio-economic situation allows. Traditional leaders also appeal to private organizations residing within the district for donations to support
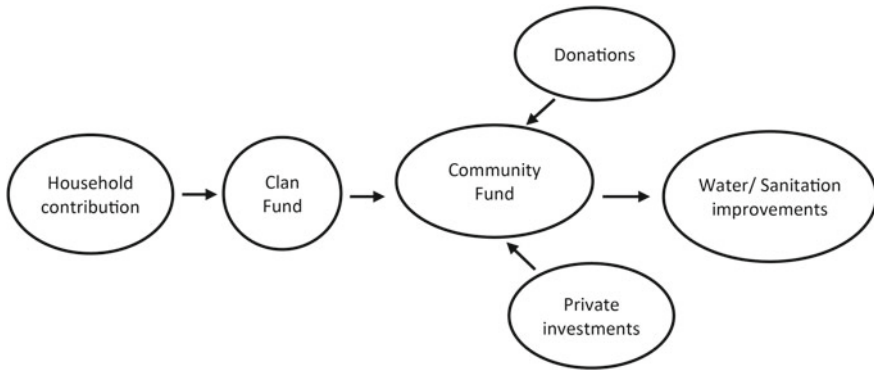
Fig. 37.7 Community mechanism for financing water and sanitation improvements. *Drawing Okyere, Diko, Ebashi, Kita*

specific initiatives. The fund is also supported by donations from clan members or relatives residing overseas, mostly in developed nations. Such donations are usually received during the annual cultural festival, which is a major fund-raising event for the community. Private individuals or families also fund their approved infrastructure proposals and are limited to the profit necessary to maintain water and sanitation facilities. The government also invests in some projects implemented through the La Dade Kotopon Municipal Assembly (LaDMA), which are severely limited.

Construction

The construction of water and sanitation facilities relies on either local artisans or technical services from private or public agencies. In most cases, when a water or sanitation facility is proposed and financed by the community, construction is carried out by community artisans. This, however, depends on local leaders' assessment of the required and available expertise needed for construction. For example, the construction of almost all shared bathrooms and toilet facilities is completed by local artisans (e.g., masons, plumbers, carpenters) living in the community. These local artisans lead the planning, design, and implementation process under the supervision of community oversight committees chaired by the divisional chief. However, highly specialized projects that require advanced technical expertise are usually contracted out or executed in collaboration with an external agency. A case in point is the construction of the community's main sewer, which was contracted out to a private organization. The traditional leaders argued strongly for engaging local artisans as labor in the construction. Community leaders considered this as critical for skills transfer in post-construction maintenance.

There are few places in the settlement that are connected to tap water. The GWCL provided these due to geotechnical issues and the complexities of extending central

distribution points. However, some community residents buy water tanks to store water to be distributed to other residents. Community leaders lament that public agencies and utility providers are rarely open to collaboration or integrating local labor in executing projects within the community.

Maintenance

The maintenance of water and sanitation infrastructure takes two forms. First, what may be referred to as "responsibility by proximity." This practice is based on the cultural perception that locals are "responsible for the surroundings." Here, residents have a common understanding that those living within a certain distance of a facility share responsibility for its maintenance, often through rotations organized by the women in each clan house. This applies to shared bathrooms, toilets, and some water tanks. The second refers to an appointment of "caretakers" for maintenance and management. The caretakers, mostly residents, facilitate and supervise the cleaning of facilities everyday. This is possible because users of water tanks and community toilets are charged a basic fee, which is used for maintenance works and caretakers' allowance. Various clan houses also delegate one person to the community management committee, who help supervise water and sanitation facility management and present monthly reports to the community representative meeting.

Modeling Indigenous Systems of Infrastructure Provision and Management

In this section, we frame indigenous mechanisms of providing and managing water and sanitation infrastructure, building on the above narratives from the perspective of actors, collaborations, and processes. Figure 37.8 encapsulates the inventiveness in collective water and sanitation provision in the Abese quarter. The roles of the various actors in the water and sanitation provision are placed into four categories, with nine different models of infrastructure provision. Three out of the existing systems for infrastructure provision are community-led. Types (A) Sole Community provision and (C) Community-Government-Cooperation provision constitute six out of nine models used in water and sanitation infrastructure provision in the settlements. Private individuals, families, and clan structures constitute the main actors.

The predominance of private and clan (family and households in the clan houses) actors embodies the inventiveness of this indigenous settlement in taking control of the challenges that confront them. This reflects the co-production aspects of creating systems with long-term ramifications for altering power dynamics that traverse, and in some cases dismantle, conditions of powerlessness, marginalization, and inequality in urban areas.[32] In cases where community partners are involved, such as the local
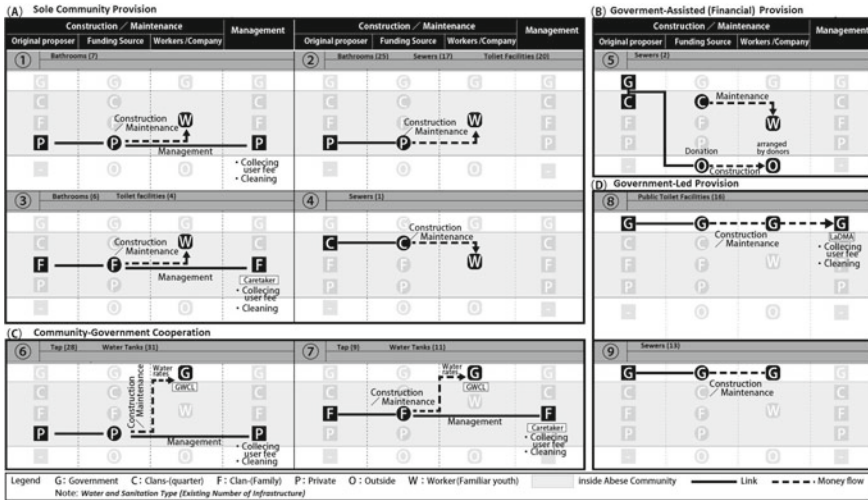
Fig. 37.8 Models of Water and Sanitation Infrastructure Provision. *Drawing* Okyere, Diko, Ebashi, Kita

government and outside agencies, these actors play a minority role. This emphasizes the co-production elements where problems are solved by internal actors,[33] a situation where residents and local actors—in this case private and clan systems—are knowledge holders and active agents in addressing community challenges.[34] Not surprisingly, the majority of the water and sanitation infrastructure provided in the Abese quarter are through their own collective inventiveness—as captured by (A) Sole Community provision and (B) Community-Government-Cooperation provision in Fig. 37.8. The government's limited role in water and sanitation infrastructure provision and their seeming ambivalence toward informal communities' challenges have spurred local actors in the Abese quarter to rely on indigenous knowledge and systems to control and traverse their challenges by inventing solutions to sustain their community. This inventiveness demonstrates their innovations and therefore obligates planners and decision-makers to learn and inform co-production methodologies to address the challenges of marginalized communities.[35]

Despite this grounded community inventiveness in the context of limited local government interventions, it goes without saying that proactive, context-sensitive, and strong partnerships from local government and other public authorities are critical to engender current models to generate transformative outcomes. In the next section, we outline the implications of this for co-producing bottom-up urbanisms in *informalizing* cities.

Conclusion: Toward Co-producing Bottom-Up Urbanisms

This chapter has provided an account of water and sanitation deficiencies in the Abese old quarter of La Dade Kotopon district and community-led mechanisms for improving these conditions. These mechanisms, underpinned by their indigenous social systems and practices, unravel how a centuries-old social structure and deliberative decision-making engender bottom-up opportunities for identifying and addressing water and sanitation infrastructure needs. Local collective action and inventiveness present avenues for problematizing and prioritizing needs, mobilizing financial resources, and instituting strategies for providing and maintaining infrastructure. In the context of social innovation, it reinforces the view that creative recombination of assets, such as social capital and local skills, can enhance the capacity to act for the common good.[36] In both the process and the product of water and sanitation improvements, this example from the Abese quarter highlights indigenous informal settlements as knowledge hubs that can inform public and private actors in reorienting how they address urban problems in informal settlements. Such knowledge is also critical to help urban actors identify ways to institute collaborative frameworks that can support the exchange of information among indigenous settlements and their residents and other urban development stakeholders, particularly urban planners. The awareness of indigenous knowledge, its acceptance, and assimilation by urban actors can then become part of methodologies to co-produce inclusive and sustainable improvements at the local level.

The aforementioned entails some important planning implications. At the theoretical level, it corroborates the discourse on paying particular attention to mundane practices in African cities as crucial first principles for unlearning established conventional planning practices to (re)learn from the bottom up: focusing on the critical urban issues and what local people are already doing.[37] In terms of planning practice, urban planners must center co-production methodologies in planning for informal settlements. That is, built environment professionals and policymakers must bring informal residents to the planning table as peers in knowledge, practice, and design and as imperative partners in decision-making, planning, and implementation and evaluation of responses to informality. It implies context-sensitive efforts at capacity building, sharing resources, and decision-making powers. Indeed, the impetus for co-production methodologies should be their ability to rely on informal residents' inventiveness in infrastructure delivery to both overcome vulnerabilities for the poor and enhance local resilience in the face of future uncertainties, such as climate change and (post) COVID-19 cities. Hence, recognition of and collaboration with local inventiveness, even if incipient, should be part of the response to the call for "de-technicalization" of and appreciation for the context in planning and design for informal settlements anywhere and everywhere.

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Chapter 38
The Inclusion of "Unequals:" Hotspot Network Strategy for a Metropolitan Agricultural Revolution Eluding Informality

Antonella Contin, Pedro B. Ortiz, and Valentina Galiulo

Abstract This chapter analyzes the effects of metropolization on territorial divisions, the dynamics of development, the ways of life at the intersection of space and society, and how territories produce resistance or explosive growth through metropolitan expansion and opportunities. We are concerned with medium-sized cities within a metropolitan context: peri-urban, interstitial metro-agro-land, widespread uncontrolled land occupation and urbanization, and the informal inhabited countryside where many people live as invisible people. The urban–rural issue is strongly related to the problem of migration. We must make agriculture attractive through agribusiness for social/political stability and agro-farming for the private sector development. This research outlines an approach capable of activating and formalizing new production processes for collaborative metropolitan development, taking advantage of the heritage and culture of local inhabitants and migrants. It proposes regenerating and accumulating local values to connect them to the socio-economic sphere in production value chains through participation and innovative value-added processes. A methodological indication for the formal and uncontrolled settlements of the city—like the shadow of Peter Pan—must work together; we understand the informal economy, and its attractors can foster the reversal of spontaneous settlements into legality, providing them with services to improve the sustainability of the city. This chapter reports a methodological approach to describe and interpret the territorial matrix, reaching the rules of the formal and informal conceptual/physical integration patterns for different contexts. Outcomes of this project seek to transition and integrate rural and urban cultures. We consequently propose a hotspot network as a pattern of urban–rural linkage settlements, including the new integration migrant

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communities. It works as a structurally integrated archipelago of functions and infrastructures, a unit that contributes to sustainable development. It creates and maintains multifunctional landscapes whose connection guarantees a dynamic equilibrium, capitalizing multipolar city-center proximities, advanced services, and governance structures.

Keywords Informal settlements · Marginalization · Agro-farming · Inclusion · Post-COVID city

This chapter focuses on informal settlements caused by the phenomenon of marginalization and lack of metropolitan planning. The phenomenon of the desegregation of large megalopolises unable to offer adequate services to individuals is a dynamic that has worsened during the COVID-19 pandemic. There is a lack of debate on how we should arm our thinking to face an unprecedented situation impacting humanity. In short, we access the reality of our cities flattened by tactical issues that are not the result of strategic thinking about the city. The "pop-up" pandemic infrastructure speeds up changes that cities have prioritized without civic engagement. It has once again left behind vulnerable residents who have long been marginalized in city planning.[1] The change process deserved long-term planning and participatory procedures and was not designed to solve the problems of most marginalized communities. However, the pandemic-induced pedestrian street seems to produce newly gentrified communities. That is because the transformations have not taken care of environmental factors at the root of health disparities. The well-being of the vulnerable community was a secondary intention of these projects.[2] It is a priority to determine how the models of integration between infrastructure and physical space influence the location of the various settlements, classes, and social groups in the city to resolve the settlements' pathology and the public sphere.

A methodological indication for the development of a new settlement type is required to understand the effects of metropolization on territorial divisions, dynamics of development, intersections of space and society, how territories produce resistance, growth through metropolitan expansion, and opportunities. It determines a sustainable relationship between urban and rural areas both at regional and local levels. This method must also integrate informal/illegal marginalized people who occupy unbuilt areas. Consequently, the proposed hotspot network is a formality-gradient settlement type that will allow new mobility structures by capitalizing on city-center proximity and advanced services. However, a pattern of urban–rural linkage settlement capable of including the new communities needs de-familiarization and de-territorialization, a kind of reduction to zero of the distinct cultural references to be recovered in comparison not to what is different, but to what unites them. It is a creative and inventive process of new hybrid territories and "affective" spaces—an in-depth critique of the notion of genius loci.

The Phenomenon of Metropolization. A Discussion on the Relationship Between Informality and the Inability of Governance Structures to Manage the Phenomenon

Urban explosion is only partially explained by natural urban population growth, but since WWII as rural–urban migration. We are concerned with medium-sized cities, peri-urban and widespread urbanization, and the informally and/or illegally inhabited rural periphery where many live as invisible people. These are places with often unsustainable development in the metropolitan region indifferent to the importance of the long cycle of economic growth and settlement. We study the effects of large urban areas on these territories from physical transformation, social distinctions, spatial inequalities, and differences in economic, social, and cultural capital.

Our research intends to uncover an idea of the habitability of space, preparing the premises by helping architecture and urban planning to think about climate change risks, scarcity of resources, and territory as the ground project.[3] The urban–rural issue is strongly related to the problem of migration. Massive migration means poverty and injustice, namely hunger. Making agriculture attractive through a sustainable agribusiness for social/political stability and agro-farming for local private sector development is a question of analysis, development, interpretation instruments, and methodological transformation. According to Koolhaas, "The countryside was a canvas on which every movement, ideology, political bloc, and individual revolutionary projected its intentions."[4] This chapter proposes investing in rural development in the city to transform poor rural people into a resilient community. Thus, we propose a new description of cartographic territories as a tool for underlining potentialities, strategically working as "visions" to pull together multiple stakeholders involving governance implementation through an informal process.

The Challenge

Investing means having a dividend in the long term that requires the roots of change to be fixed to the ground. Referring to a possible metropolitan project, investing in the development of the rural and peri-urban areas in the city increases the ability of poor people to adapt to new production processes for collaborative metropolitan development (Fig. 38.1). These processes take advantage of the local inhabitants' heritage and culture, as well as the migrants who come from other territories (sometimes rural) to regenerate and accumulate local values. It connects them to the socio-economic sphere at other scales through participation and innovation. The development is endogenous energy and not from the outside.

We must provide a physical base for new communities that allows smooth integration with the hosting communities. We propose a methodology for defining which areas of the city are suitable, where land is available for connecting new settlements, and where to formalize already existing pockets of informal settlements. We start by
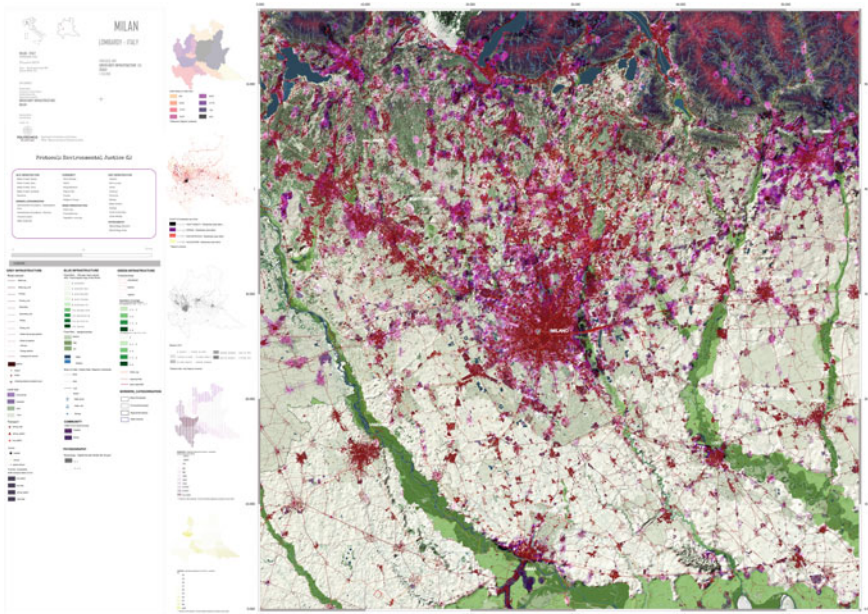
Fig. 38.1 Environmental Justice—Protocol Map. *Credit* V. Galiulo, MSLab 2020 (from TELLme Erasmus + project, Training *for Education, Learning, and Leadership toward a new Metropolitan Discipline, 2017–2020*)

identifying the challenges or opportunities in reducing possible environmental risks to remediate the impact on people and land caused by the expansion of informal settlements. Our goal is to facilitate the economic inclusion of new communities when starting enterprises in host communities. There are main opportunities for hosting communities even if they face a large influx of people, especially in a crisis (managing the transition from humanitarian aid to sustainable urban development). However, there are also social challenges felt by the local and migrant communities that hinder integration and social cohesion. These challenges are faced by women, youth, and the most vulnerable of both communities.

The Unexpected Post-COVID City: Tactics Without a Strategy

COVID-19 is a traumatic, unexpected, and violent global event. According to David Harvey, a new kind of collective action is needed to be free. Adriana Cavarero, quoting Arendt, reminded us of how the city needs places from which democracy can arise, places where we can be together and enjoy active participation in the city.[5] We hypothesize that metropolitan urban–rural linkages could be understood as an

active resource for participatory democracy. A horizontal space of participation and welfare produces a feeling of adequacy in all inhabitants and city users.

Today, the metropolis is endangered. The larger the creature is, the slower its adaptation. Without giving up its identity of stability, it can no longer survive rapid transformation due to COVID-19. In biology, viruses are most capable of fast-changing environments; their smallness enables constant mutations at an unbelievable pace. Attempting to reflect this biological principle as the "Metabolists" did, to save the big city, planners are competing against the viruses. They are seeking to rebuild with remarkably rapid transformations of urban space that had seemed impossible before the pandemic. These include new bike routes, on-street parking converted to loading zones for restaurant pickup, and outdoor dining on streets and sidewalks.[6]

The pandemic, sweeping away the densification paradigm, suggests the superiority of smallness, an organic unicellular structure, or tactics without a strategy. However, another essential feature of viruses is their dependency on other organisms. Much like viruses require cells to reproduce, and cities need a structure. These almost incorporeal concepts have significant potential in thinking about pandemic architecture. The virus seems to be the new paradigm finding similarities with the informal settlement pattern and ecosystem flexibility. It revealed the need for a linked structure and the loss of visibility that the closure of public spaces brought to vulnerable communities. Nothing was added in their design to respond to the increased inaccessibility to the public realm's new spaces by those coming from the outside. "The question is how to design the process to push back on those inequalities. That means trying to understand why specific spaces in our cities, especially in our suburbs, are so hostile. Today, visions of urban life reinvented for the future are colliding with unaddressed inequalities from the past. Moreover, the urgency of a public health threat is pushing up against demands for the long work of inclusion."[7]

Inclusion involves rethinking a redistribution of services to community-based organizations through a comprehensive approach that considers environmental justice and space plans as prerequisites. The implementation of public works is necessary for empowering freedom of movement and providing mobility choices for the weakest communities. We draw the conviction that the COVID-19 pandemic has only accelerated structural and not merely accessory phenomena already present in metropolitan cities. We are interested in considering the phenomenon of the desegregation of large megalopolises no longer offering adequate services to people, a dynamic that has worsened in recent months.

While it is true that the growth of many megacities was mainly due to "migratory phenomena," the great exodus caused by the pandemic has shown all the fragility of the welfare system.[8] Access to basic services and quality of life based on citizens' health and feeling of adequacy are past and future planning goals. Because spatial form must be understood as a critical factor that sets up models of sustainable urban metabolism, of integration or vice versa of segregation in the city, the starting point of this work arises from the need to define the contemporary city within its territory through a new metropolitan scale of intervention.
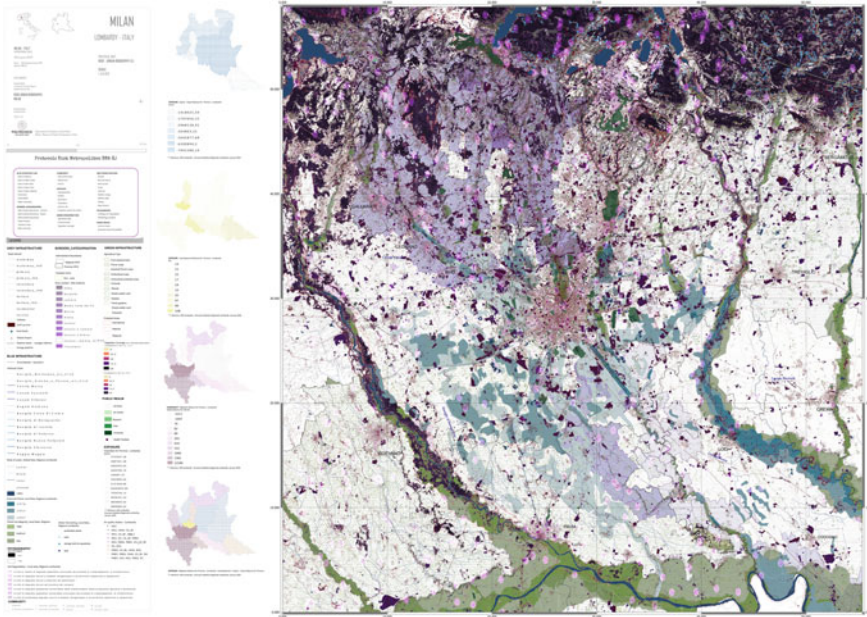
Fig. 38.2 Risk Metropolitan DNA—Protocol Map. *Credit* V. Galiulo, MSLab 2020 (from TELLme Erasmus + project, Training for Education, Learning, and Leadership toward a new Metropolitan Discipline, 2017–2020)

Informal Metropolization: The Project of Transition Between an Agricultural and Urban Culture

We are analyzing a city that is beyond the notion of an "optimal city," of formal and informal/illegal settlement, of the city as the shadow for Peter Pan (who is not able to manage his shadow and is condemned to remain in adolescence), a city that must be reconsidered to work together. We must understand the informal economy and its links within the spatial issues, thus integrating the two parts of the same city.[9] The purpose of our study concerns the mutual adaptation of the formal and informal spatial dimension (Fig. 38.2), practices, and diverse cultures to give shape to the area of contact or buffer zone that determines an architecture of boundary objects.

Methodological Outlines: The "Imaginary" Power of Informality

The need for a cultural "jump" should identify a range of new relations in the metropolitan context and different civil society agents, rather than upgrade the

instruments of intervention and investigation. We suggest the "de-territorialization" concept that defines new territorialities, which are not coincident with administrative and political boundaries and new populations.[10] We are speaking about a methodological indication for developing a new settlement of urban–rural linkage to prevent the creation of the informal settlement. Our vision may envisage a sustainable relation between green and gray infrastructure.

Our research project's field of action analyzed metropolitan dynamics in between and among different landscapes that are reconnected through the transition areas' design. We focus on the metropolitan realm. We must understand how to integrate the management of the local culture with the informal/illegal mechanisms of who occupies the agricultural areas. Such a strategic device, conceived through the analysis of the anthropological signs found in the informal city fabric rules of construction, should also be able to communicate with the agricultural landscape. It not only has the potential to provide products for consumption and sale to local communities, but also becomes an element of urban regeneration. The informal area's quality of life consists of cultural identity and social solidarity, factors of productivity, and societal efficiency. The approach is no longer to prosecute and illegitimate informality; it is a real change of paradigm.

A management approach to informality must be set, informality conceived as part of the system and no longer the anti-system or the non-system. However, it is methodologically challenging to develop the dialog between the formal and the informal. Direct dialog is impossible as the formal is defined as a set of parameters that the informal does not follow. The existence of the informal becomes the "failure" of the formal. The challenge is to find a way to make that dialog possible by introducing a buffer, a clutch, that will allow that switch off–on transition. In governance terms, that buffer is the NGOs. They can dialog with both the formal and the informal, complementing the formal, unable to accept within its ontological structure the informal's existence.[11] In social services, the NGOs do play that role and reach where formality cannot. Formal social services cannot expend resources and funds to people that are not formally computed. Nevertheless, they can relate to NGOs that do have a formal façade and manage the transition of these legal resources to their informal side dealings.

In the economic realm, informality is by essence, all transactions that are not controlled by formality. They cannot be taxed. Taxing just the formal sector will destroy the economy, and it becomes an invitation to go under the radar and become informal. Without saying that taxes cannot be imposed on incomes that are not detected, if just 30% of the economy, the formal one, is taxed, the burden of social services and public investment will only be borne by 30% of the economy (for the benefit of the 100%). These economies would never be able to develop. That is the curse and self-perpetuating loop of underdevelopment. As direct taxation, progressive is impossible; these economies must rely on indirect, regressive taxation. That is fine in economic terms: taxing consumption as an alternative to production. However, it is not right in social terms. Indirect taxes are regressive; they only compensate if social chapters of the public budget weigh more than economic infrastructures. However, it is not possible to postpone development. Politics can only address this dilemma

of economic informality management, but only by a political class with collective intelligence.

Formal planning defines with detailed precision what can and cannot be formally built, as many societies cannot or do not want to perform these formal parameters. In consequence, they build with no parameters in non-planned, marginal, illegal, and often dangerous areas. Land has no formal value. Owners are sometimes accomplices of the process that provides them with informal value. These informal areas cost from 3 to 9 times more to upgrade from informality to some sort of essential formality than areas planned, even with low standards, from scratch. The buffering approach would be to define flexible standards in the plan areas where just the public spaces and the plot layout are defined. Other standards, unimplementable, can be introduced later as the neighborhood evolves and wealth allows. Construction is permitted even without the basic urban infrastructures (water, sewage, and electricity), but the street pattern does provide the layout for its introduction, whenever possible. An excellent example of this approach is the 1000 urban settlements in 50 years of Cardenal Cisneros established in America under the Ley de Indias. The Foundational Plan of these settlements just defined the public spaces layout, squares, streets, and the plot pattern. No quality standards for the buildings were defined. The quality of the result of these urban "plazas" is exemplary. The extensions of the nineteenth century only jeopardize them. However, in essence, mud and straw in the sixteenth century became marble and bronze in the twentieth century. The informal has become formal.

Outcomes: Metropolitan, Urban-Scale, and Informal-Formal Integration

This study stresses the need to introduce the epistemological aspect of our methodology as a means to analyze the growth as evolution across scales. Our aim is to record the model of city and territory on a metropolitan scale. As designer-actors of contemporary society, our project aims to carry out an investigative function in concrete behavior, cooperating with the juridical moment and the abstract concept (the principle of sustainability) that is its factual presupposition. However, the focus is the works of metropolitan architecture. These define new patterns of urban–rural linkage in the interphase territories between the scales deciphering urban and rural fabrics and behaviors "…as a pattern language mechanism of urban growth. They provide a framework for the formal-informal dialogue."[12] Nevertheless, our mapping tool is necessary because it is through a deep understanding of the need for metropolitan work that resilience and inclusion in metropolitan citizenship are founded.

Otros Saberes and Territorial Intelligence

For the persistence of places altered by metropolitan projects that intercepted them with infrastructures born from global logics and occupied by informal or illegal settlements, the usually adopted solution is "re-territorialization."[13] Nevertheless, our research expresses a critique of the notion of genius loci. We hypothesize designing the metropolitan city that does not erase the values linked to the quality of place properties, rethinking the narrative notion of "other knowledge" or "Otros Saberes." We are interested in studying the narratives of all the new metropolitan inhabitants in light of the historical-political situation that generated them. The rapid consumption of the territorial setting of metropolitan areas means that one can find and choose different lifestyles in a brief period. One can become a citizen everywhere without necessarily assimilating even more profound traditions, and multicultural and transcultural buffer zones.

Therefore, we are talking about a space appropriated by different subjects and a project that is not designed only for the individual. We can say that the community has the priority access required to be part of it. The green-gray infrastructure space is an "agora space," a place of knowledge, learning, and service capable of determining landscape citizenship that constitutes the conditions so that rights are applied.[14] Democracy's space recognizes all human beings as bearers of rights and duties even if they are not legally citizens; this space represents the body of people who by no civic law have rights.

The Project: Metropolitan Development in Fragile Informal Territories: Cooperation, Integration, and Leadership Project

Our proposal promotes research and innovation, building real actions as an incubator of possibilities, working not only as an immediate response to specific local needs, but also as a generator of value on a metropolitan scale. This work's significance is the replicability of such a model in different metropolitan regions. It includes city peripheries that are exploding or regions that provide ecosystem services cut out from the infrastructure and service system. In the logic of replicability, Metropolitan Cartography becomes a spendable resource for the decision-making process of institutional interpretation of metropolitan complexity through spatialized open-source data.[15, 16]

The Site-Specific Priorities of the Action: Type of Activities Proposed and Specified Related Outputs and Results

The global objective is youth economic empowerment in Tinguà Valley-Nova Iguaçu-Rio de Janeiro (Brazil), and Acatlán de Juárez-Guadalajara (Mexico). It offers a critical factor for political stability, good governance, and economic development, fostering a real inclusion of marginalized people into the hosting city, avoiding informality. First, the project must conceive policies and actions related to integrating poor housing management and agriculture, which need a systemic relationship between the settlement and its territory. The metropolitan approach integrates issues related to developing these sub-sectors into cross-cutting themes of climate change, social justice, and cultural heritage preservation.

The Hotspot Network

The explosive growth induced by different extractivisms and the related migration of workers from rural areas usually leads to uncontrolled urbanization, increasing the demand for natural resources without investments being used in a long-term perspective and immediate interests.[17] Workers move to the city generating informal settlements. In order to avoid this scenario, a systemic approach is necessary to protect environmental resources and, at the same time, encourage the development of economic activities linked to natural resources and agriculture bringing long-term prosperity to local communities. We present a general methodology applicable to all those contexts where explosive growth causes criticalities in a model's definition. The proposed model is based on an integrated vision on a territorial scale that requires new implementation tools. They must be capable of investing in local interventions with a new role confronting informality dynamics.

In Guadalajara, the Commission for the Regularization of Land Tenure (CORETT) reported that starting in 2000, a new manifestation of irregularities became evident, contributing to the phenomenon of current urban dispersion. The main problem contributing to the chaotic development of current metropolitan urbanization processes is the lack of planning. Today, even though the population growth until the last survey stabilized, the whole metropolitan area shows expansion in terms of land consumption. It has generated sprawl and illegal occupation of natural and agricultural areas. Our research investigates how the reintegration of nutrition into national and local policies can guide reducing food insecurity and prevent the risk of increasing informality in Guadalajara (Fig. 38.3).

The Municipality of Nova Iguaçu belongs to the Metropolitan Region of Rio de Janeiro, located northwest of the city of Rio de Janeiro. Water is an essential natural resource. The loss of watersheds surrounding the cities threatens the long-term availability of freshwater in cities. Climate change exacerbates the situation by increasing the variability in rainfall, causing more frequent droughts and floods.
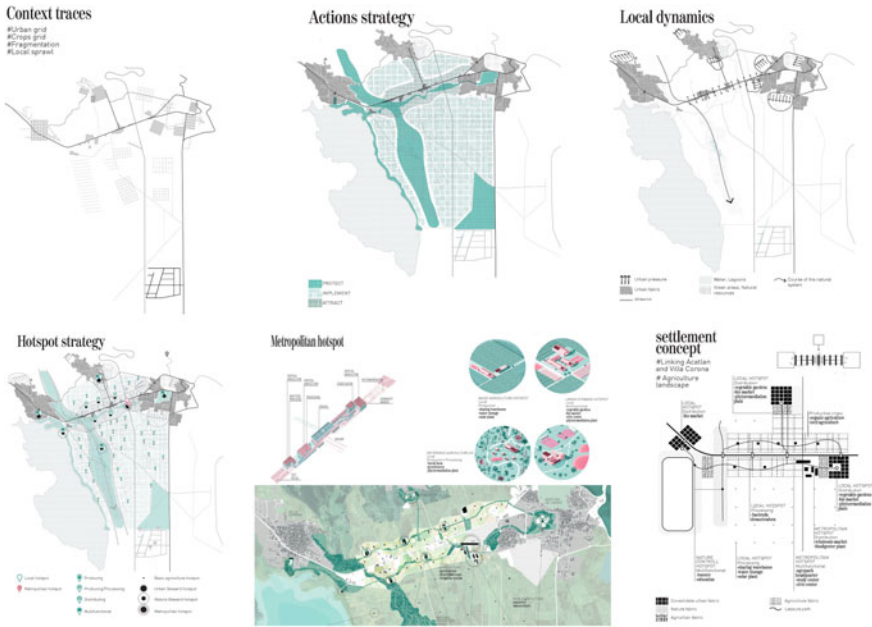
Fig. 38.3 Metropolitan Hotspot's Network in Guadalajara—Acatlán de Juaréz. *Credit* V. Rigamonti, MSLab 2020

Threats to water security put urban lives and economies at risk while increasing the potential for conflict.

The proposed metropolitan project in the neighborhood of Tinguá involves a strategy of connecting the linear city to the metropolitan network. Urban bioagriculture offers potential as a new local economy business model. It can serve as a buffer zone between rapidly growing urban space and protected areas. Starting at the foot of the Reserva Biológica do Tinguá, linking the water and food systems identifies existing landscape patterns and their relevance for metropolitan life. Once the local values are recognized through these patterns, the proposed solution elaborates them into a newly developed economic system based on family agriculture with specific interventions.

The project aims to recognize family agriculture as a critical figure in rural areas' social and economic dynamics. The proposed strategy is based on a circular economic model that allows this informal agricultural activity, while acting as a buffer zone to preserve natural and social resources in the metropolitan system. For this reason, together with the cartographic process, a tool is proposed on which to base an economic development project called the hotspot network. The hotspot network works as an archipelago of functions and infrastructures (water and energy), a unit that serves as an urban–rural settlement pattern linkage. It can provide essential

contributions to sustainable, resilient urban development as it creates and maintains multifunctional urban–rural landscapes whose connection guarantees a dynamic equilibrium.

Agriculture must not be considered an isolated sector, since a systematic framework considering market access, value addition through food processing, and infrastructural management for surplus production is required to cross the chasm between self-subsistence and exchange economy. After a first phase supported by funding projects, the hotspot network will enhance the transition from an extractive economy to a productive economy based on homogeneous accessibility. Thus, it creates the hotspot connection to the metropolitan axis and the internal cohesion creation of a value chain. The hotspot functions can be divided into four typological macro-classes linked to the different economic aspects of interest: residential, productive, distributive, and multifunctional. These functions define different spatial and organizational characters that can be simultaneously incorporated into the hotspots depending on the resources allocated and the project's development strategy. The low-cost housing system traverses all projects. The hotspot, responding with every context, structures buffer zones of natural–rural, rural–urban, and urban–natural linkage to:

(1) Gradually transform and develop the urbanity of the agricultural periphery of the metropolitan city.

(2) Produce a settlement pattern that, in a rural environment, prevents the fragmentation of family-run agricultural fields in the territory to prevent the generation of problems, avoiding same resource management favored by a lack of awareness of their intrinsic territorial and cultural value.

For each link, the project defines a specific set of actions required (attract/protect/implement) to sustainably develop the area.[18] The project designs clusters where several types of hotspots, starting from the existing fragmented urban and agricultural pattern, are placed. Each housing project, both in urban and rural environments, can be part of the hotspot system that will enrich it with fundamental urban functions such as public, production, and distribution. There will also be multifunctional hotspots. The joint action of the clusters creates a metropolitan network. The hotspot system proposes a more flexible solution permeable to local conditions. It is integrated into the urban or rural fabric and existing dynamics without resorting to extremely coercive interventions. Such actions would radically change the existing structure without ensuring better chances of success. The reduced size of the intervention (replicable) allows a greater concentration of the invested resources, promoting their more efficient use; simultaneously, the punctual character guarantees greater freedom of spatial localization, avoiding dependence on massive infrastructural interventions. Therefore, the definition of such hotspots would guarantee an advantage in terms of territorial planning, acting as midpoints of subsequent interventions to increase the connection of the areas to the metropolitan system.

Across these functions, the hotspot network can self-produce energy, water, and waste treatment and then perform a monitoring role to provide data on the territory, practices, and production processes in their areas of influence. In addition to the socio-educational advantage, the availability of a gradual and incremental database

and monitoring points increases the management capacity on the territory, preventing the adverse effects caused by the widespread fragmentation of family farming.

Project Description

In the Guadalajara area, the multifunctional hotspot project is designed in a metropolitan peri-urban area that is still mainly agricultural. Thanks to its proximity to the city center and presence of a railway station, it can be thought of as its future expansion. The set of residential buildings, service buildings (storage, transformation, sale), and public buildings constitutes this peri-urban type of hotspot network. The pattern of the settlement embodies a social farm. It also houses the warehouses and a market. In this context, the settlement responds to the need to provide housing and services: the production and sale of food for the city, becoming an integrated part of it and not just a satellite. Therefore, the prior study relates to its proper size, location, architectural form, and urban composition to allow the public buildings to become a generator of an idea and a public institution with its relative public space.

Such objectives, creating an integrated agricultural system which can be referred to as an agro-ecological industry chain, allow linking agriculture activities with other sectors to obtain mutual benefits. To promote the recycling economy, improving community awareness of environmental protection and resource conservation is required. Moreover, capacity-building processes play an essential role in creating the right conditions for success. Encouraging such initiatives should be a long-term objective, with clearly defined milestones to be monitored and evaluated periodically. The project proposes social farming and a network with small local agricultural producers.

If the Guadalajara project is in a peri-urban context, Tinguà represents a rural context. It is a residential settlement consisting of 12 single-family houses, market, and school (Fig. 38.4). The school, small hospital, consulting room, and canteen will be the residential settlement "stem cells" of an idea of the city and civil cohabitation. It allows women to take care of the hotspot, starting the transition from subsistence crop to a sales crop. The existing agricultural activity—highlighted by the rural pattern analysis—is based on a self-referential informal market outside of formal economic rules. Even if there is a lack of competencies to develop a more structured market, this community's resilience can create a self-sustained reality and demonstrate the social value of collective actions. The applied solution aims to implement familiar agriculture as a trigger for productive and economic development. It establishes a complementary market chain able to integrate Tinguà into a more structured system of the metropolitan city. The key enabler of such premises is creating a hotspot network and a "…community foundation to promote a safe life, environmental protection, and circular economy strategies."[19]

The project intends to start the social farm and a small multi-service agricultural center to pilot an agricultural mechanization program. The proposal aims to recover the invested capital within four years from the beginning of the activity. The objective

Fig. 38.4 *Credit* Buzzella, C., Tomasella, B., Marcon, D. MSLab 2020

is profit, but with a strong and positive social impact-oriented alternative to land grab-bing and monoculture. Such pathologies are devastating for developing countries, linked to each other, and identified as some of the leading causes of informality.

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Chapter 39
Toward an Architecture of Civil Disobedience in the Upgrading of Informal Settlements

Carin Combrinck, Gustav Muller, and Morne du Bois

Abstract Despite the rapid emergence of informal urbanism in the twenty-first century, the response from the architectural profession remains lethargic and ambiguous. This chapter reflects on the rapid growth of informal settlements in South Africa and the architectural profession's continued disengagement from this issue. With architecture being a legally bound profession, the question arises of how architecture positions itself within the politics of informal urbanism. The state's position on informal settlements is purposefully set out in an array of spatial policies aimed at addressing their upgrade and urban integration. An informal settlement situated amid the affluent eastern suburbs of Pretoria, South Africa, is presented as an example of how these policies have been misinterpreted over a span of more than a decade, with little to no evidence of architectural engagement. The study reveals that architects have missed critical opportunities to be spatial agents in the transformative constitutionalism concerning the upgrading of informal settlements and their socio-economic integration. Through this exploration and interpretation of the politics surrounding informal urbanism and architecture, it is evident that the profession is paradoxically confined within its legal boundaries. Due to these legal limitations, it is argued that the profession may need to engage in acts of civil disobedience in order to serve as activists for spatial justice within the context of informal urbanism.

Keywords Informal urbanism · Architectural profession · Spatial politics · Legal boundaries · Civil disobedience · Spatial activism

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Globally, the twenty-first century has seen a rapid increase in—and research on—informal urbanism.[1] In South Africa, a progressive human settlements policy makes provisions for in-situ upgrading and urban integration, yet officials from local authorities, as well as provincial and national governments, still prefer to evict unlawful occupiers,[2,3] demolish structures,[4] and move people to alternative accommodations at the urban peripheries.[5,6] Despite recent judgments that mandate meaningful engagement between local authorities and unlawful occupiers,[7] there is neither the institutional capacity nor political will to break free from the binary choice between doing nothing and formalizing relocated subsidized housing.[8] A case in point is the Plastic View informal settlement in the City of Tshwane, where the Supreme Court of Appeal has ordered the City of Tshwane to engage with the local occupiers, NGOs, and other stakeholders to develop innovative solutions[9] to the contested situation.[10] Significantly, leading up to this judgment was more than a decade of applications launched in the Gauteng Division of the High Court in Pretoria to break the stalemate about the upgrading of Plastic View. None of the judgments that were handed down pursuant to the applications consider a transformative interpretation of the existing legal framework that could be leveraged as part of the path toward crafting innovative solutions for the upgrading of Plastic View.[11] In addition to this, there is a brazen omission of built environment professions, especially architects, whose professional skills are pertinent to this issue. In this chapter, we explore the transformative potential of the legal framework for built environment professionals and reflect on the continued disengagement of the architectural profession, in this discourse in particular, because of its paradoxical confinement to legal bounds as set out by the Architectural Profession Act 44 of 2000 ("Architectural Act"). We argue that the architectural profession may need to engage in a discourse of civil disobedience in order to serve as activists for spatial justice within the context of informal urbanism.

Legal Framework

In 1994, the Department of Housing (as it was then known) published a *White Paper* to mark the beginning of its process to house the nation as part of an inclusive and comprehensive housing policy framework. The *White Paper* estimated that there were 8.3 million households in South Africa in 1994 and that the projected annual population growth would result in the formation of an additional 200,000 households per year, on average, until 2000.[12,13] However, Tissington observed that the "housing need"[14] was set to increase exponentially between 2011 and 2014. The latest indications reveal that more than 2 million households or 13% of people in South Africa live in informal dwellings.[15] The housing need in South Africa is exacerbated by the fact it is closely linked with a denial of access to basic services like water,[16] sanitation,[17] refuse removal,[18] electricity,[19] and telecommunications.[20]

The *Grootboom* case is a landmark judgment for the interpretation of the right of access to adequate housing in section 26(1) of the Constitution of the Republic of South Africa, 1996. In this case, Justice Yacoob held that the City of Cape Town's

housing policy was unconstitutional to the extent that it did not include a reasonable plan for those people in desperate need.[21] He provided a nuanced exposition of the obligations that flow from section 26 of the Constitution. In his analysis, the right of access to adequate housing entails "more than bricks and mortar." Importantly, this includes access to:

> ...available land, appropriate services such as the provision of water and the removal of sewage and the financing of all of these, including the building of the house itself. For a person to have access to adequate housing all of these conditions need to be met: there must be land, there must be services, [and] there must be a dwelling.[22]

Four years later, as a direct result of *Grootboom*, the Department of Human Settlements included a chapter on the upgrading of informal settlements ("UISP") in the National Housing Code.[23,24] The upgrading of informal settlements is a "national housing program" for purposes of section 3(4)(g) of the Housing Act 107 of 1997 ("Housing Act").[25] The program was developed to facilitate a structured upgrading of informal settlements in a phased approach.[26] The interdependent and polycentric objectives of the UISP are to promote security of tenure, health and safety, and empowerment.[27] The implementation principles of the UISP seek to approach the upgrading of informal settlements in a "holistic, integrated, and locally-appropriate manner."[28] The salient feature of this approach is flexibility. All decisions about upgrading an informal settlement demand a context-sensitive analysis of the rights and needs of unlawful occupiers in order to find concrete and tailored solutions for each community.[29] The UISP envisages that these case-specific solutions will primarily be achieved through engagement between local authorities[30] and communities.[31]

In practice, local authorities incur the primary obligation to provide access to adequate housing because "in some instances, the full realization—or at least the ultimate administration—of programs designed to make good the promise of th[is] right … rests on municipalities."[32] The Housing Act assigns local authorities the power to ensure that the inhabitants of its area of jurisdiction have access to adequate housing,[33] which is a competence listed in schedule 4A of the Constitution. The Housing Act places an obligation on national and provincial governments to provide any assistance that local governments may need to support and strengthen their capacity to fulfill their duties in terms of the Housing Act.[34,35] Engagements with local authorities should focus *inter alia* on how they will promote the fostering of a favorable environment for the fulfillment of housing obligations[36]; "racial, social, economic, and physical" integration in both rural and urban areas throughout South Africa[37]; and densification in support of "the economical utilization of land and services."[38] Local authorities must also ensure that the upgrading of informal settlements, as a discrete kind of housing development, will "provide as wide a choice of housing and tenure options as reasonably possible" and will be "based on integrated development planning."[39,40] The Spatial Planning and Land Use Management Act 16 of 2013 ("SPLUMA") was enacted to create a regulatory framework for inclusive spatial planning and land use management in South Africa. Additionally, a list of

developmental principles is enumerated in SPLUMA against which all spatial planning, land development, and land use management will be evaluated. The principle of spatial justice directs that:

(i) past spatial and other development imbalances must be redressed through improved access to and use of land; (ii) spatial development frameworks and policies at all spheres of government must address the inclusion of persons and areas that were previously excluded, with an emphasis on informal settlements, former homeland areas, and areas characterized by widespread poverty and deprivation; (iii) spatial planning mechanisms, including land use schemes, must incorporate provisions that enable redress in access to land by disadvantaged communities and persons; (iv) land use management systems must include all areas of a municipality and specifically include provisions that are flexible and appropriate for the management of disadvantaged areas, informal settlements, and former homeland areas; (v) land development procedures must include provisions that accommodate access to secure tenure and the incremental upgrading of informal areas; (vi)…[41]

Land development, according to the principle of spatial sustainability, must be promoted "in locations that are sustainable and limit urban sprawl" and according to the principle of spatial efficiency, optimize "the use of existing resources and infrastructure."[42,43] The principle of spatial resilience demands that every effort should be made to ensure the fostering of "sustainable livelihoods in communities most likely to suffer the impacts of economic and environmental shock."[44] In turn, the principle of good administration dictates that the preparation of all plans, policies, schemes, and procedures must "include transparent processes of public participation that afford all parties the opportunity to provide inputs on matters affecting them."[45]

These principles illuminate the complexity of upgrading informal settlements and emphasize political will, endurance, and multi-sectoral partnerships as essential elements for the success of any upgrading process. Engagements with communities and partnerships with civil organizations, NGOs, and public interest lawyers have been beneficial to secure a rights-based approach to upgrading informal settlements. However, the next frontier is to forge partnerships with built environment professionals, especially architects, for the phased development of the upgrading process.

The Architectural Act established the South African Council for the Architectural Profession ("SACAP") and afforded it the primary powers of regulating the[46]: (a) registration of (candidate and professional) architects, architectural technologists, and architectural draughtspersons[47]; (b) professional conduct and any disciplinary action taken against these registered persons[48]; (c) fees and charges that are payable to it[49]; and (d) accreditation of any higher education institution and their educational programs in architecture.[50] However, SACAP has the further general power to advise the Minister of Public Works and Infrastructure, any other minister, and the Council for the Built Environment "on any matter relating to the architectural profession."[51,52] In our view, this includes the power to advise the Minister of Human Settlements on those aspects of informal settlement upgrading that could benefit from architectural intervention. Our view is sustained by a general principle in the Housing Act that animates all "housing development" initiatives.[53] This principle places an obligation on national, provincial, and local governments to "facilitate active participation

of all relevant stakeholders in housing development."[54] Given their expertise and training, architects are in a unique position to provide technical advice and guidance on upgrading informal settlements.

Architectural approach

Philosophically, architectural discourse has engaged with the Lefebvrian view of the production of space over the last number of decades,[55] with a plethora of movements being held under the umbrella of "Spatial Agency"[56] or an "Architecture of Social Engagement."[57] According to Till,[58] considered to be one of the leading minds in this domain, the architectural profession can no longer afford to avoid its political mandate and impact. Through some of the movements listed in Table 39.1, the understanding is that, where existing urban constructs are not serving their communities in a just and equitable manner, it is imperative for those at the forefront of spatial innovation, such as architects, to engage in this context proactively, even challenging the law by way of civil disobedience in pursuit of socio-spatial justice.

In the South African context, where the growth of informal settlements has increased dramatically over the last decade,[73] it would seem as though such involvement by the architectural profession would be self-evident. Supported by the progressive yet under-utilized and under-explored legal framework described above, it would appear as though such interventions would not even be judged as civil disobedience, despite the general perception that informal settlements exist as unlawful entities. Yet the architectural profession at large remains disaffected and mostly disengaged from this issue. A cursory glance at regional architectural merit awards that have been bestowed upon recipients over the last decade reveals that there have been no acknowledgments of any work undertaken in the upgrading of informal settlements. Rather, projects completed in gated communities and business parks, the epitome of exclusion, have received recognition, publication, and accolades.[74]

Singular interventions by pioneering architects such as Noero,[75] Rich,[76] Smuts,[77] Dewar[78] remain marginal to the mainstream profession. Successful examples of intervention such as the Violence Prevention through Urban Upgrading project in Cape Town remain localized,[79] failing to achieve large-scale multiplication. Younger practices such as Fieldworks Design Group and 1 to 1 Agency of Engagement operate at the edges of subsistence while forging ahead, often having to work at risk.[80,81]

While there are schools of architecture in the country attempting to create an environment of critical engagement,[82] examination panels consisting of practitioners continue to assess final year work based on the design of object-buildings, paying little attention to the understanding of complex architectural discourse around the processes involved in the pursuit of spatial justice. Despite thesis documents presented that may shift the paradigm toward an interpretation of the socio-spatial opportunities afforded in the upgrade of informal settlements, students are seldom rewarded for their efforts.[83] This leads to a lack of confidence in young graduates who are then confronted by practice, where again the emphasis falls back on compliance

Table 39.1 A plethora of architectural approaches in which concern with spatial agency is addressed

Architectural approaches	Description
Advocacy design	Designers serve as advocates and representatives for clients with cause, constituency, and agenda[59]
Esthetic dissensus	Esthetic dissensus is aimed to question the systems of power which control the daily routines and behaviors of individuals. The non-violent protest aspects of disruptive esthetics lie in the gentle and indirect way it exposes hierarchies in which unique personal experiences can take place. This causes politics to be seen as an experience and not a linear set of practices controlled by authority and power[60]
CoDesign	Design research and thinking have evolved from the expert realm toward user-centric collaboration, based on the principle that everyone is creative[61]
Community action planning	Community action planning is aimed at empowering communities to take ownership of their own development trajectories[62]
Design activism	Design activism challenges the power relationships in the design process to engender positive social and environmental change. Design is seen as a political and social act[63]
Grassroots design practices	Collective actions that are initially small, but could become regional or national in scope, including housing, health care, and civil rights[64]
Inclusive spatial layouts	Spatial layouts that disrupt the status quo of fenced property lines and invite users to partake with the everyday experience of the space, thus leading to a sense of spatial sharing
Participatory action research	Through collective inquiry, reflection, and action, researchers and participants attempt to understand their context while simultaneously wishing to improve it. It is influenced by a view on local context, history, and culture embedded in social networks and relationships. PAR is aimed at empowering those who are involved[65]
Participatory mapping	Participatory mapping is interactive and consists of capturing geo-spatial data in various ways to depict their immediate environment. Observations and anecdotes may contribute to the richness of the data captured[66]
Pattern analysis	Identifying specific patterns of social structures. Looking at patterns of movement, interaction, any violations of human rights or any form of appropriation. The aim of this method of data collection is to see any changing trends and the frequency thereof. It also allows for possible assessments of future changes to be made[67]

(continued)

Table 39.1 (continued)

Architectural approaches	Description
Political design	According to Carl DiSalvo,[68] the political surroundings of a society can be experienced through the moment where current power relations are revealed and confronted through various acts of resistance and disturbance within public spaces. When this definition and design are superimposed, a political design aims to reach a space that will initiate contestation[69]
Pro bono design	Practitioners dedicating a certain number of hours to community projects, providing network, and knowledge needed for design in service of public good[70]
Situated testimonies	Situated testimonies are informal interviews that are held while mapping the exact moment and place where the interview is taken. The important part of this is to map any changes on the ground based on the answers one gets from the interviewee and pin a specific location to it on a map of the site[71]
Tactical urbanism	The end goal of tactical urbanism is to find relevant spatial iterations that will work most efficiently within different social, political, or economic contexts through the use of temporary interventions[72]

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with National Building Regulations as monitored by SACAP, rather than challenging these constructs. As all building plans need to be approved by local authorities, few professional practices are prepared to undertake the tedious process of challenging these processes.

The general perception remains that informal settlements are unlawful, so that intervention by way of tactical urbanism is considered outside of the legal constraints of building regulations, thus exposing a registered professional to the risk of losing their professional accreditation with SACAP. However, despite the appearance of such civil disobedience, an interpretation of the UISP and SPLUMA paradoxically puts the profession within the ambit of the law with such interventions.

The Plastic View informal settlement (Fig. 39.1), also known as Woodlane Village, is situated on municipal land to the east of the Pretoria CBD in Gauteng, South Africa. Surrounded by affluent gated communities, this settlement has been the focus of a multitude of court cases spanning more than a decade between residents of the surrounding estates, the City of Tshwane council, and Lawyers for Human Rights. From the orders, it is evident that neither the judges nor the council officials were able to interpret the spatial implications available under the UISP and SPLUMA, and that the absence of any contribution by the architectural profession contributed to the ongoing stalemate (Table 39.2).

In the *Meadow Glen* case, the court recognized the transformative potential for finding innovative solutions with the assistance of a skilled professional to mediate between competing interests:

Fig. 39.1 Plastic View informal settlement. *Photo* UP Arch Hons ISF group 2020

When these matters were raised with them counsel for both parties indicated that they would endeavor to find a workable solution. This is imperative, as the residents of Woodlane Village have been living in squalid conditions over the past eight years without any solution in sight. Indeed their hopes for a solution have been dashed. The report of Tswelopele non-profit organization makes it clear that the residents have formed a community. Examples of this are that 85% of the household have at least one person in the formal employment sector; the dwellings are numbered, which enables occupants to access medical facilities; the people have elected an executive committee and in addition to the five members of the committee there are also 31 block leaders. There is a real likelihood of the parties finding a workable solution if there is the will to do so, even under the authority of an independent overseer that could hold all parties accountable. In this instance, the parties must find innovative methods to resolve the competing interests of the different factions of the community.[84]

In 2016 and again in 2020, students enrolled for the Honors and Masters degrees within the Urban Citizen studio in Architecture at the University of Pretoria engaged with the community of Plastic View to undertake participatory action research, participatory mapping, community action planning, and CoDesign.[85] Data that were collected through these engagements were shared with the network of NGOs concerned with the plight of the community. CoDesign processes included stakeholders representing the residents of the settlements, as well as NGOs. This represents a significant move to include architectural thinking in the narrative (Fig. 39.2), although it remains to be seen whether there will be a meaningful shift in the City of Tshwane's position any time soon.

Table 39.2 A summary of the court orders regarding Plastic View and their relevance to current legislation and architectural discourse

Judgment against CoT	Principles enshrined in UISP 2004	Principles enshrined in SPLUMA 2013	Relevant architectural discourse
Date: 10 Nov 2008		*Judge Hartzenberg*	
Unlawful occupiers moved to demarcated area	Context-sensitive analysis of rights and needs of unlawful occupiers	Prior to SPLUMA	Participatory mapping; pattern analysis; situated testimonies
Date: 27 March 2009		*Judge du Plessis*	
Demarcated area to be extended and fenced off	Structured upgrading in a phased approach	Prior to SPLUMA	Community action planning; political design
Date: 21 May 2009		*Judge Hartzenberg*	
Further unlawful occupiers moved to demarcated area, fence to be extended	Obligation of national and provincial government to aid local government	Prior to SPLUMA	Inclusive spatial layouts
Date: 17 July 2009		*Judge Hartzenberg*	
All orders to be complied with by 21 August 2009	Administration of programs rests on municipalities	Prior to SPLUMA	Community action planning
Date: 21 Aug 2009		*Judge Hartzenberg*	
Order to maintain fence, to enforce access control, provision of water and portable chemical toilets	Promotion of security of tenure; health and safety; and empowerment	Prior to SPLUMA	Design activism
Order to agree on viable plan for long-term housing needs	Upgrading of informal settlements to provide as wide a choice of housing and tenure options as reasonably possible		Esthetic dissensus
Date: 20 May 2011		*Judge du Plessis*	
Order to furnish names of individual council officials responsible for implementation of court orders	Case-specific solutions achieved through engagement between local authorities and communities	Prior to SPLUMA	Advocacy design
Date: 15 Sept 2011		*Judge du Plessis*	

Table 39.2 (continued)

Judgment against CoT	Principles enshrined in UISP 2004	Principles enshrined in SPLUMA 2013	Relevant architectural discourse
Mr Fanie Fenyani (council official) committed to imprisonment for one month for non-compliance, order suspended on condition of compliance	Obligation of national and provincial government to aid local government	Prior to SPLUMA	Advocacy design; design activism; inclusive spatial layouts; CoDesign
Date: 5 June 2012		*Judge van der Byl*	
Township to be established by 30 November 2013	Local authorities must ensure upgrading to be based on racial, social, economic, and physical integration of urban areas	Prior to SPLUMA	Advocacy design; design activism; inclusive spatial layouts; CoDesign
Eviction of those not qualifying for housing	Context-sensitive analysis of rights and needs of unlawful occupiers		Grassroots design practices; Probono design; tactical urbanism
Relocation from demarcated area and removal of structures	Case-specific solutions achieved through engagement between local authorities and communities		Community action planning; inclusive spatial layouts; CoDesign
Provision for consultation process	Case-specific solutions achieved through engagement between local authorities and communities		Participatory action research; community action planning
Failing compliance, eviction of all persons in demarcated area	Obligation of national and provincial government to aid local government		Advocacy design; design activism; tactical urbanism
Date: 12 June 2013		*Judge Kubushi*	
Application to have Mr Fenyani imprisoned dismissed with cost		Spatial planning mechanisms must incorporate provisions that enable redress in access to land by disadvantaged communities and persons	Advocacy design; design activism; tactical urbanism

(continued)

Table 39.2 (continued)

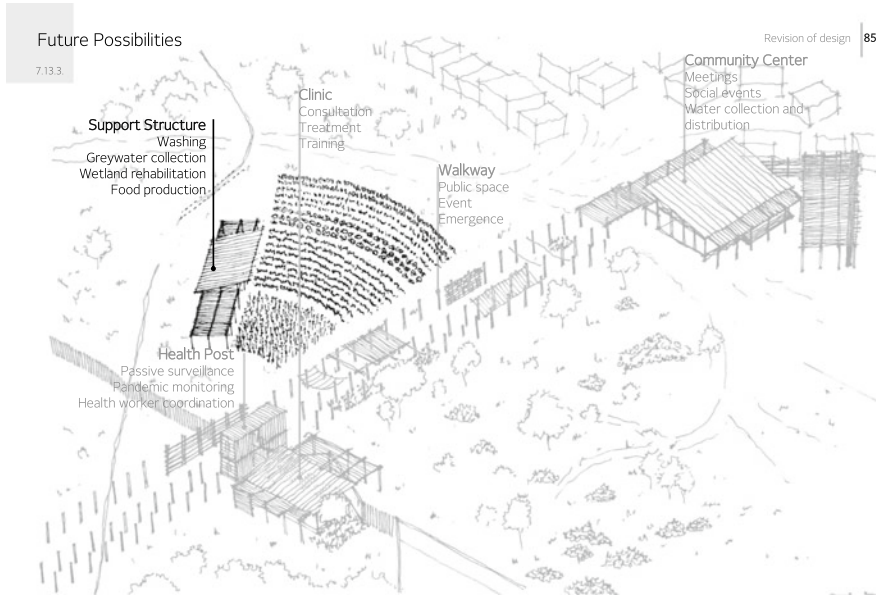| Judgment against CoT	Principles enshrined in UISP 2004	Principles enshrined in SPLUMA 2013	Relevant architectural discourse
Date: 3 Feb 2014		*Judge Webster*	
City of Tshwane continued with non-compliance; ordered to repair the fence, employ security guards, and verify unlawful occupiers		Principle of spatial sustainability "in locations that are sustainable and limit urban sprawl"	Advocacy design; design activism; tactical urbanism
City of Tshwane ordered to commence eviction with fortnightly reports		Every effort to be made to foster "sustainable livelihoods in communities most likely to suffer impacts of economic and environmental shock"	Community action planning; inclusive spatial layouts; CoDesign
Date: 2 April 2014		*Judge Pretorius*	
City of Tshwane and Mr Fenyani found guilty of contempt of court and fined		All plans, policies "must include transparent processes of public participation...to provide inputs on matters affecting them"	Community action planning; inclusive spatial layouts; CoDesign
Date: 4 Sept 2014		*Judge Fabricius*	
City of Tshwane to bring eviction application	Context-sensitive analysis of rights and needs of unlawful occupiers	Frameworks and policies at all spheres must address the inclusion of persons and areas that were previously excluded	Participatory mapping; pattern analysis; situated testimonies
Rescission application by lawyers for human rights		Ensure an integrated approach to land use and land development that is guided by the spatial planning and land use management systems	Advocacy design; design activism; tactical urbanism
Date: 1 Dec 2014		*Supreme Court of Appeal*	
Appeal dismissed with reasons			

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Fig. 39.2 Proposed intervention toward integration. *Drawing* Adrian Buffa

Evaluation

At the time of writing this chapter, the impasse at Plastic View continues and has become further complicated by the development of a neighboring informal settlement known as Cemetery View. From the court orders, it is evident that the judges did not explore the full interpretive potential of the existing legal framework by way of the UISP and SPLUMA. In addition, one can see clearly that the local authority officials similarly have presented no intention of engaging with these legal mandates, not even complying with direct court orders to address the issue.[86]

Aside from academic involvement, the absence of the architectural profession in this narrative is concerning, in light of their creative potential in resolving the spatial tensions represented by informal settlements. According to Florida,[87] architects may be seen as part of the "super creative class" of society. These are the people who are the collective thought leaders, leaders in innovation, and creative problem-solving. In *Meadow Glen*, the court underscored the fact that built environment professionals—particularly architects—are ideally placed to craft creative solutions to the highly complex situation in which the residents of Plastic View and the surrounding estates find themselves. Although the policy instruments provided make allowance for participation at various levels of decision-making,[88] as well as funding support from the provincial government to support local authorities in these endeavors, there is a lack of transformative interpretation and creative innovation to bring these policies to life.

Conclusion

It is our view that professional architects may be hamstrung by their compliance to municipal bylaws on the one hand, and on the other hand, the attitude of SACAP that enforces compliance rather than supporting a critical engagement with the spatial challenges that remain prevalent in South Africa. Unless there is a concerted drive to step outside these narrow bounds that are paradoxically trying to uphold the socio-spatial inequalities of the past, the political stalemate may continue indefinitely. It may be time to present with more courage, engaging within the murky peripheries of civil disobedience to make manifest the progressive legislation that we have available to us through section 26(2) of the constitution in that it is responsive to the exigencies of those in desperate need.[89]

Finally, we consider it important to teach these architectural approaches to counter the dearth of professionals with capacity[90] and thereby encourage a counter-culture of critical engagement in the built environment. The rich repository of data and creative visualization presented by students in the Urban Citizen studio provides an encouraging opportunity to support this view.

Endnotes

1. Watson "African urban fantasies: Dreams or nightmares?" 215–231; Varley "Postcolonialising informality?" 4–22; Ley "Juggling with formality and informality in housing" 13–28; Roy "Urban informality" 147–158.
2. See the *Beja* case, the *Nokotyana* case, the *Abahlali* case and the *Joe Slovo* case.
3. Chenwi "Legislative and judicial responses to informal settlements" 549.
4. See the *Tswelopele* case for an example of such an incident since the introduction of the upgrading program. Contrast with the *Rikhotso* case for an example of such an incident shortly after the advent of democracy and the *Fredericks* case for an example during the peak of apartheid.
5. Muller, Gustav "Considering alternative accommodation and the rights and needs of vulnerable people." *South African Journal on Human Rights*, 30, No. 1 (2014): 41–62.
6. See the *Fischer* case, *Baron* case, the *Melani* case, the *Joe Slovo* case, and the *Port Elizabeth Municipality* case.
7. See the *Joe Slovo* case and the *Occupiers of 51 Olivia Road* case.
8. Clarke and Tissington "Courts as a site of struggle for informal settlement upgrading in South Africa" 376.
9. In the *Port Elizabeth* case, Justice Sachs reasoned at paragraph 39: "In seeking to resolve the above contradictions, the procedural and substantive aspects of justice and equity cannot always be separated. The managerial role of the courts may need to find expression in innovative ways. Thus, one potentially dignified and effective mode of achieving sustainable reconciliations of the different interests involved is to encourage and require the parties to engage with each other in a proactive and honest endeavor to find mutually acceptable solutions.

Wherever possible, respectful face-to-face engagement or mediation through a third party should replace arm's-length combat by intransigent opponents."

10.   The *Meadow Glen* case.

11.   Klare "Legal culture and transformative constitutionalism" 150 and Van der Walt *Property and Constitution* 24.

12.   *White Paper* at 7 the Department of Housing stated that "there is no comprehensive source of information on housing" and therefore added the disclaimer that "the statistical information in this section must be seen as indicative only."

13.   *White Paper* par 3.1.1(b).

14.   Tissington *A Resource Guide on Housing Policy and Implementation* 34 observes that the department recently abandoned the term "housing backlog," because the time-specific nature of the term and rapid urbanization made it very difficult to quantify housing backlogs accurately. Instead, the department adopted the term "housing need" to refer to the investment required to provide housing for those in need of housing.

15.   Statistics South Africa *Statistical Release P0318, General Household Survey 2018* (2019) 32. To place this in context, the survey indicates that the 16,671 million household in South Africa during 2018 can further be divided into the following types of households: 13,520 million households or 81.1 % in formal dwellings; 0.84 million households or 5% in traditional dwellings; and 0.14 million households or 0.8 % in other dwellings.

16.   *White Paper on Housing GG* 354 *GN* 1376 of 23 December 1994 ("*White Paper*") par 3.1.4(a) estimated that 25% of all functionally urban households did not have access to piped potable water supply in 1994. The latest statistics from Statistics South Africa indicate that the percentage of households in South Africa that have access to water increased by 4.2% (or 4.904 million) from 84.4% (or 9.448 million) in 2002 to 88.6% (or 14.352 million) in 2017. The most prominent modalities of access to water are piped water in the dwelling, piped water on site, a public/communal tap, and water tanker. Furthermore, the quality of potable water in South African households is perceived as: harmful to their health by 7.7%; cloudy/unclear by 7.4%; unpalatable by 8.6%; and foul-smelling by 6,8%. See Statistics South Africa *Statistical Release P0318, General Household Survey 2017* (2019) 35 and 40.

17.   *White Paper* par 3.1.4(b) estimated that 48% of all households did not have access to flush toilets or ventilated improved pit latrines ("VIP toilets") while 16% of all households did not have access to any type of sanitation system in 1994. The latest statistics from Statistics South Africa indicate that the percentage of households in South Africa that have access to sanitation facilities increased by 20.5% (or 6.409 million) from 61.7% (or 6.907 million) in 2002 to 82.2% (or 13.316 million) in 2017. Having access to sanitation is described as being able to use either a flush toilet connected to the municipal sewage system or a septic tank, or a VIP toilet. Over the same period, the percentage of households in South Africa that do not have access to any sanitation facilities decreased by 9.5% (or 0.908 million households) from 12.6% (or 1.410 million households) to 3.1% (or 0.502 million households).

Not having access to sanitation is described as either using a bucket toilet or having no toilet facility at all. This then leaves 14.7% (or 2.381 million households) of the households in South Africa with access to sanitation services that are somewhere in between the golden standard of a flush toilet and no facility at all. See Statistics South Africa *Statistical Release P0318, General Household Survey 2017* (2019) 41–42.

18. The latest statistics from Statistics South Africa indicate that the percentage of households in South Africa that dump or leave their domestic refuse anywhere declined by 3.7% (or 0.309 million households) between 2002 and 2017. Over the same period, the percentage of households that use their own dump to dispose of their domestic refuse declined by 5.5% (or 0.731 million households), while the use of communal dumps to dispose of domestic refuse increased marginally by 0.1% (or 0.166 million households). Where municipalities collect domestic refuse directly from households: those instances where removal takes place less than once per week declined slightly by 0.8% (or 0.140 million households), while those instances where removal takes place at least once per week increased significantly by 9.8% (or 4.395 million households). See Statistics South Africa *Statistical Release P0318, General Household Survey 2017* (2019) 44.

19. *White Paper* par 3.1.4(c) estimated that 46.5% of all households did not have a link to the electricity supply grid in 1994. The latest statistics from Statistics South Africa indicate that the percentage of households in South Africa that are connected to the mains electricity supply increased by 7.7% (or 5.086 million households) from 76.7% (or 8.586 million households) in 2002 to 84.4% (or 13.672 million households) in 2017. See Statistics South Africa *Statistical Release P0318, General Household Survey 2017* (2019) 32.

20. The latest statistics from Statistics South Africa indicate that South African households have access to voice telecommunication services as follow: 3.5% of households (or 0.567 million) do not have access to either a landline or a mobile phone; 0.1% of households (or 0.162 million) only have access to landlines; 88.2% of households (or 14.288 million) only have access to a mobile phone; and 8.2% of households (or 1.328 million) have access to both a landline and a mobile phone. South African households have access to data telecommunication services as follows: 61.8% of households (or 10.010 million) have access to the Internet using all available means, while only 10.6% of households (or 1.717 million) have access to the Internet at home. In both modalities, the best access is experienced by households in the Western Cape (70.8% and 25.7% respectively) and Gauteng (74% and 16,5%, respectively), while the worst access in both modalities is experienced in the Eastern Cape (51.8% and 3.5% respectively) and Limpopo (43.6% and 2.2%, respectively). See Statistics South Africa *Statistical Release P0318, General Household Survey 2017* (2019) 47–48.

21. *Grootboom* paras 63–69, 95 and 99.
22. *Grootboom* par 35.

23. National Department of Housing *National Housing Program: Upgrading of Informal Settlements* (2004).
24. Published by the Minister for Human Settlements in terms of section 4 of the Housing Act 107 of 1997.
25. Section 1 of the Housing Act 107 of 1997 defines a "national housing program" as "any national policy framework to facilitate housing development, including, but not limited to, any housing assistance measure referred to in section 3(5) or any other measure or arrangement to—(a) assist persons who cannot independently provide for their own housing needs; (b) facilitate housing delivery; or (c) rehabilitate and upgrade existing housing stock, including municipal services and infrastructure."
26. Par 13.3.4 of the UISP.
27. Par 13.2.1 of the UISP.
28. Par 13.2.2 of the UISP (holistic approach).
29. See also *Grootboom* par 37.
30. Par 13.2.2 of the UISP (public to public partnership).
31. Par 13.2.2 of the UISP (community partnership).
32. Steytler and De Visser "Local Government." 22–67.
33. Section 9(1)(a)(i) of the Housing Act.
34. Section 3(2)(e) of the Housing Act.
35. Section 7(2)(c) of the Housing Act.
36. Section 2(1)(e)(ii) of the Housing Act.
37. Section 2(1)(e)(iii) of the Housing Act.
38. Section 2(1)(e)(vii) of the Housing Act.
39. Section 2(1)(c)(i) of the Housing Act.
40. Section 2(1)(c)(iii) of the Housing Act.
41. Section 7(a) of SPLUMA.
42. Section 7(b)(vi) of SPLUMA.
43. Section 7(c)(i) of SPLUMA.
44. Section 7(d) of SPLUMA.
45. Section 7(e)(iv) of SPLUMA.
46. Section 2 of the Architectural Act.
47. Sections 11, read together with sections 18–24, of the Architectural Act.
48. Sections 27–33 of the Architectural Act.
49. Section 12 of the Architectural Act.
50. Section 13 of the Architectural Act.
51. Established in terms of section 2 of the Council for the Built Environment Act 43 of 2000.
52. Section 14(e) of the Architectural Professions Act 44 of 2000.
53. Section 1 of the Housing Act defines "housing development" as "the establishment and maintenance of habitable, stable, and sustainable public and private residential environments to ensure viable households and communities in areas allowing convenient access to economic opportunities, and to health, educational, and social amenities in which all citizens and permanent residents of

the Republic will, on a progressive basis, have access to – (a) permanent resi-
dential structures with secure tenure, ensuring internal and external privacy
and providing adequate protection against the elements; and (b) potable water,
adequate sanitary facilities, and domestic energy supply."

54. Section 2(1)(l) of the Housing Act.
55. Lefebvre *The Production of Space*.
56. Awan, Schneider and Till *Spatial Agency: Other ways of doing Architecture*.
57. Karim *The Routledge Companion to Architecture and Social Engagement*.
58. Till "Foreword."
59. Davidoff "Advocacy and Pluralism in Planning" 421–432.
60. Markussen "The Disruptive Eesthetics of Design Activism" 38–50.
61. Sanders and Stappers *Convivial Toolbox*.
62. Hamdi *Placemaker's Guide to Building Community*.
63. Faud-Luke *Design Activism*.
64. Martinez "Grassroots support organizations and transformative practices"
    339–358.
65. Baum, MacDougall and Smith "Participatory Action Research" 854–857.
66. Pathways through Participation *Using participatory mapping to explore
    participation in three communities*.
67. Forensic Architecture *Pattern Analysis*.
68. DiSalvo *Design, Democracy, and Agonistic Pluralism*.
69. Markussen "The Disruptive Eesthetics of Design Activism" 38–50.
70. Cary *The power of probono*.
71. Forensic Architecture *Situated testimonies*.
72. Hanson and Abdulsamad *From Pop-up to Permanent: Five lessons in Tactical
    Urbanism*.
73. In South Africa, informal settlements are the physical manifestation of unbal-
    anced access to land situated in urban areas. More than 4 million people
    find themselves living in informal settlements making this the fastest-growing
    household sector in the cities of South Africa. The main challenge is the avail-
    ability of well-located and serviced land, questioning the constitutional right
    to adequate housing and access to land on a just basis (Royston *et al Here to
    stay*).
74. A list of merit awards ranging from 1995 to 2019 was provided by the Pretoria
    Institute for Architecture (PIA) and is available from the researchers on request.
75. "Noero Architects."
76. "Peter Rich Architects."
77. "CS Studio Architects."
78. "Global architecture honor for UCT professor."
79. "Violence Prevention Through Urban Upgrading."
80. "Fieldworks Design Group."
81. "One to One Agency of Engagement"
82. Important work is being done by individual researchers and academic staff
    at various schools of architecture, with an encouraging increase in research
    output, fieldwork, and studio projects.

83. "Annemie Vermeulen from the University of Pretoria wins the 33rd annual Corobrik Regional Architecture Award."

84. *Meadow Glen* case par 36.

85. "Urban citizenship."

86. The liability of officials is regulated by the State Liability Act 20 of 1957. See *Nyathi v MEC for the Dept of Health, Gauteng* 2008 (5) SA 94 (CC) and Plasket "Protecting the Public Purse."

87. Florida "The Creative Class and Economic Development." 196–205.

88. Arnstein "A ladder of citizen participation" argues that the nature of the participation during the engagement process can be determined with reference to the ladder of citizen participation that she developed in the housing context from the terminology used in federal programs of the United States of America that are directed at *inter alia* urban renewal. The ladder consists of eight rungs, with each rung representing a form of participation. The bottom two rungs—manipulation and therapy—describe levels where there is no participation. These rungs are used as a substitute for genuine participation because the objectives of these forms of participation are to educate and cure citizens. The following three rungs—informing, consultation, and placation—describe levels of tokenism where citizens will be informed of government plans and may voice their concerns regarding these plans. She notes that these rungs do not ensure citizens that their concerns will be heeded and as such do not confer any real power to effect a change in the status quo. The final three rungs—partnership, delegated powers, and citizen control—describe levels of citizen power, where citizens are afforded increasing degrees of decision-making power which they can use to induce significant social reform so that they can share in the benefits of the affluent society.

89. *Grootboom* par 44.

90. Ziblim *The dynamics of informal settlement upgrading in South Africa.*

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Chair in Property Law and the Socio-economic Rights and Administrative Justice research group at Stellenbosch University.

Morne du Bois, MArch (Prof.) is a candidate architect whose final year thesis explored how architecture could be a vehicle for transcending boundaries of social exclusion in cities of the Global South. His research observed conditions impacting people living in the informal settlements of Plastic View and Cemetery View in the City of Tshwane and engaged with members of the community. Through this research, it became clear that physical, social, and legal boundaries were preventing residents of the informal settlement from practicing their right to the city. du Bois is currently focusing on community-based design and intends to continue pursuing socio-spatial justice through architecture.

Chapter 40
Seeking Disciplinary Relevance in the Informal City: Rebuilding Architectural Practice through Community Engagement

Rudolf Perold

Abstract Building is a crucial act for residents of informal settlements. Notwithstanding this normative architectural practice finds it challenging to engage with the socio-spatial complexity inherent to the collaborative making of buildings in informal settlements. This chapter seeks to explore how architectural practice can be rebuilt through community engagement so as to find disciplinary relevance in the informal city. In this exploration, I engage with architects who have experience with multidisciplinary projects that straddle the formal and informal, who engage in an impure and hybrid mode of architectural practice that is grounded in its context—a grounded architectural practice employed as liminal space, where the contradictions between the formal and informal can be addressed and resolved. I approach this search for disciplinary relevance as an urban geographer seeking to understand the reality of informal settlements, as well as an architect wanting to transform the built environment in a way that improves the lives of marginalized residents. Nonetheless, this exploration focuses on the rebuilding of architectural practice through community engagement, rather than imposing normative architectural practice onto the informal city. The exploration is situated in the context of Cape Town, and employs two case studies that offer a view of architectural practice and community engagement as urban socio-spatial phenomena characterized by a high degree of informality.

Keywords Grounded architectural practice · Informal settlements · Community engagement · Activity theory · Developmental work research

Building is a crucial act for residents of informal settlements. Notwithstanding this normative architectural practice finds it challenging to engage with the socio-spatial complexity inherent to the collaborative making of buildings in informal settlements. This research seeks to explore how architectural practice can be rebuilt through community engagement so as to find disciplinary relevance in the informal city. In this exploration, I engage with architects that have experience with multidisciplinary

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projects that straddle the formal and informal, who engage in an impure and hybrid mode of architectural practice that is grounded in its context–a grounded architectural practice employed as liminal space where the contradictions between the formal and informal can be addressed and resolved.

In post-apartheid South Africa, the nature of architectural practice and community engagement is influenced by the imperative to recognize and reinforce the spatial agency of marginalized residents. In practice, this requires architects to advocate on behalf of residents of informal settlements, often engaging with them long before and after the conventional duration of professional service. The focus of this research is on the rebuilding of architectural practice through community engagement, rather than imposing normative architectural practice onto the informal city. This exploration is situated in the context of Cape Town, and employs two case studies that offer a view of architectural practice and community engagement as urban socio-spatial phenomena characterized by a high degree of informality.

Problem Statement

African cities are predominantly informalized with residents having to rely on their own efforts to secure livelihood and shelter.[1] This is the inevitable result of rigid (and often outdated) formal urban development processes that are insufficiently responsive to demands for urban change. Subsequently, for residents who are spatially excluded and economically marginalized, the only viable option to sustain an urban livelihood is to disregard formal processes. The resulting socio-spatial complexity leads AbdouMaliq Simone to describe African cities as:

> ... characterized by incessant flexibility, mobile, and provisional intersections of residents that operate without clearly delineated notions of how the city is to be inhabited and used. These intersections ... have depended on the ability of residents to engage complex combinations of objects, spaces, persons, and practices. These conjunctions become … a platform providing for and reproducing life in the city.[2]

Architects are compelled by their central role in society—as spatial experts with a responsibility to foster the greater good for all—to actively explore ways to support informal settlement residents in their attempts to secure a better living environment.[3] Notwithstanding continued calls for engagement, the architectural profession remains marginal to such endeavors in Cape Town, and indeed in the whole of South Africa. By and large, architects fail to support resident-driven initiatives, and find it challenging to engage with the socio-spatial complexity inherent to the collaborative making of buildings in informal settlements.[4] Working in the context of this complexity requires additional engagements that are not codified to the same extent as the rest of standard architectural service. There exists a need to describe such engagements in order to broaden the definition of architectural practice.

In my work, I refer to this broader mode of practice as "grounded architectural practice" (GAP). GAP entails border crossing: a form of professional suicide that

has the potential to energize both scholarship and practice by encouraging radical transgressions in professional thought and practice.[5] Edgar Pieterse describes the challenge inherent in border crossing as being able to achieve a balance between "the straightjackets of professional norms and codes" and "getting lost in the rabbit hole of transgressive insurgency."[6] Only once this balance has been found can contextual solutions that work in the present and add up to structural change in the future be developed. For architects, this includes proactive engagement with residents to support the upgrading of their informal settlements.[7] Such engagement holds the potential to rebuild architectural practice: to resist its present marginality by empowering residents and recognizing them as equal partners in the production of the built environment.[8] This recognition will require a blurring of the notions of formal and informal—negating the artificial boundary that separates the two—allowing procedural as well as everyday activities to inform architectural practice.[9,10]

Methodology

In order to explore how normative architectural practice can be rebuilt through community engagement, I have conducted a case study analysis of two completed projects in Cape Town that offer a view of architectural practice and community engagement in contexts characterized by a high degree of informality. The two projects are the Harare Library in Khayelitsha by Charlotte Chamberlain & Nicola Irving Architects (CCNIA) and the Dunoon Library by the City of Cape Town (COCT) urban sustainability unit. Libraries were deemed a suitable building typology to inform the exploration into GAP as they involve a range of institutional role players (e.g., local and provincial government, library services, and library material sponsors), and by virtue of their community-focused role, which also requires consultation with a number of local stakeholders (e.g., business and community forums, local schools, and daycare center organizations).

Semi-structured interviews with the project architects were central to community engagement and design development processes. The interview questions focused on the everyday actions and negotiations that occurred during these two interrelated activities, and attempted to explore the many related practices they involve. This form of research is sensitive to the oppositional practices of residents toward local government and enables the development of "richly textured narratives" that "thicken our conceptions of urbanism."[11] Furthermore, it facilitates an understanding of the "contingent universals" of any situation: both the specificities of place and that which can be shared across other contexts.[12]

In order to structure and analyze the interview data, I employ the principles of activity theory (AT) and developmental work research (DWR). AT is concerned with "doing in order to transform something,"[13] and posits the activity system in Fig. 40.1 as a unified dynamic whole that constitutes the minimum meaningful context for understanding human actions.[14] The first generation of AT introduced a triangular model of a "complex, mediated act" consisting of a subject, an object, and a mediating
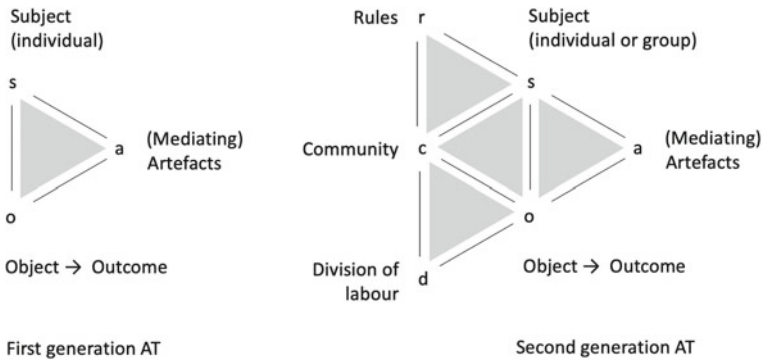
Fig. 40.1 First two generations of AT: a mediated act and its social context. *Diagram* Rudolf Perold, adapted from Yrjö Engeström, "Developmental Work Research: A Paradigm in Practice"

artifact. The agency of the subject—an individual or a group—is the point of view employed in the analysis, with the unit of analysis being an object-oriented and artifact-mediated activity system framework that enables the mapping of activity as it unfolds over time.[15]

Within this framework, *objects* are understood as being raw materials, conceptual understandings, or even problem spaces at which the activity is directed so as to achieve the *outcome* desired by the *subject*.[16] The dynamic yet indirect relationship between the subject and object is mediated by *artifacts*, which can take the form of physical tools, cognitive signs or symbols, other people, or even processes.[17] Artifacts both alter and are altered by activity and their properties are developed over time, as they are employed by different people in different contexts.[18] As such, the experiences of others who have employed an artifact "accumulate in the structural properties of the [artifact] as well as in the knowledge about how the [artifact] should be used."[19] From this follows that artifacts can be imbued with different symbolic meanings within specific cultures.[20]

In second-generation AT, the unit of analysis is expanded from individual action to collective activity, and the social elements of community, rules, and division of labor are introduced to the activity system framework.[21] The *community* is the group of individuals who share the object with the subject, constituting the socio-cultural context of the activity.[22] Two other elements emanate from this socio-cultural context: the community's shared rules and their division of labor. *Rules* can be formal, informal, or technical, and by influencing the subject's actions in the collective activity, they constrain the activity system to a certain extent. The final social element of the activity system framework is the *division of labor* within the community, this division pertaining to the continually negotiated responsibilities, tasks, and power relations that inform collective activity.[23] As such, AT perceives activity (such as architectural practice) as a complex system of mediated interactions between subjects, communities, and the object of their activity.[24]

Yrjö Engeström describes DWR as a multidisciplinary extension of AT that enables researchers and practitioners to perform empirical analyzes of activity that "lead to the threshold of the future" by uncovering the shortcomings of such activity.[25] Such analyzes constitute a unique learning space that forms a bridge between what is known and what needs to be learned.[26] This hypothetical learning space enables researchers to analyze activity and explore how the contradictions that arise as the activity unfolds over time are resolved. DWR is underpinned by three methodological ideas:

- The unit of analysis is a collective, object-oriented activity system, mediated by artifacts and by the community of stakeholders that assemble around the activity, as well as the rules and division of labor that pertain to the activity.
- The causes of disturbances, innovations, and change are understood as contradictions embedded within the activity system.
- Change and development are understood as collective learning processes that lead to the "local expansive construction of new artifacts and new models of shared practice."[27]

These ideas pertain to the activity system framework embedded in DWR, which is used to analyze the "mirror of everyday practice."[28] As indicated in Fig. 40.2, the latter is provided by semi-structured case study interviews. In the course of interview analyzes, intermediate conceptual tools with the potential to lead to new models for practice are invented. In this research—by virtue of representing a broader mode of architectural practice—GAP is understood as such a conceptual tool.
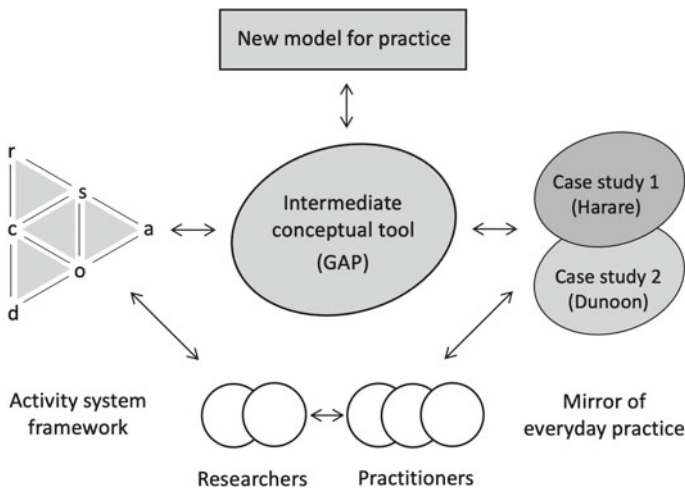

Fig. 40.2 DWR as employed in the research presented in this chapter. *Diagram* Rudolf Perold, adapted from Engeström, "Developmental Work Research: A Paradigm in Practice"

Case studies

I will discuss the two projects selected as case studies in order of completion, starting with the Harare Library, which was completed in 2011. Charlotte Chamberlain & Nicola Irving Architects (CCNIA) designed the Harare Library in collaboration with Tarna Klitzner Landscape Architects (TKLA) and violence prevention through urban upgrading (VPUU, a multidisciplinary community development organization). These three entities constitute the collective *subject* of the AT analysis, while the *object* is to make a library that meets the requirements of the client (the City of Cape Town, COCT), while also addressing the needs of the residents of Harare. Accordingly, the desired *outcome* of their activity is a building that contributes positively to the socio-spatial development of the settlement.

Prior to CCNIA being appointed to design the library, VPUU had spent three years engaging with the community, gaining their trust, and setting a process in motion to establish a network of safe streets and pedestrian links. The library was to be embedded into the settlement as a node along with one of these pedestrian links, and TKLA was appointed to assist with the landscape architecture aspects of the design, thereby establishing a thoroughly multidisciplinary project team. While challenged by the complexities in the brief presented by the COCT, particularly with regard to the low literacy level of residents and the question of how to make the library engaging to them, CCNIA benefited from the combined expertise of the project team.

The principal *artifact* employed in the activity is the standard architectural service, which is defined by the South African Institute of Architects (SAIA) in their client-architect agreement.[29] This service is expressed as a number of sequential work stages, each associated with a portion of the professional fee. The standard architectural service is also subject to the regulations of the South African Council for the Architectural Profession (SACAP). However, SAIA is a voluntary organization, SACAP is a statutory body, and all architects are bound to their code of professional conduct.[30] The standard architectural service and code of professional conduct have developed in the context of a formal, market-driven economy. They are based on the assumption that clients are able to engage with architects on equal terms. When employed in the context of an informal settlement, the standard architectural service—with its very specific structural properties and symbolic meaning—is simply inadequate.

The socio-cultural context of the activity is defined by the *community* assembled around the making of the library, who share this object with the project team. Harare is a neighborhood in Khayelitsha, an apartheid-era formal settlement that has experienced high levels of informal growth over the past twenty-five years. The settlement is poverty-stricken and notorious for its high crime rate, and VPUU's social development interventions aim to address both of these issues. Accordingly, the community dialog transformed the brief from a community library into a "House of Learning" that supports learning at various stages of a person's life. Beyond conventional services such as access to books and electronic media, the library also includes a computer center, a study hall, meeting rooms, and offices for community groups, as well as

an early childhood development center with facilities for nearby day care centers, which are encouraged to bring children into the bright and stimulating environment of the library.

A number of *rules* emanate from the composition of the community assembled around the activity. CCNIA took their cue from VPUU, who was the lead consultant and had very strict rules relating to communication channels. These rules gave transparency to the consultation process, providing CCNIA with access to knowledgeable partners while at the same time supporting them in navigating the complexity of the multi-stakeholder process. At the onset, there were many community forum meetings, which gave CCNIA an acute awareness of the socio-spatial complexity of the project. These meetings also brought to the fore the question of how to balance the interests of the various stakeholders, and indeed, who the real client was. The COCT wanted a secure, fortified, and enclosed building, while VPUU desired a building that formed an active edge to their pedestrian route so as to improve safety. At the same time, residents had a completely different set of needs that had to be addressed. The result is a large and complex building that blurs the boundary between inside and outside, with a double volume internal street shown in Fig. 40.3 acting as the "living room" of the neighborhood. The various components of the building are arranged around this space.

Community participation is central to VPUU's work, and as such, the *division of labor* included the involvement of residents in the design process through a number of special-interest forums. CCNIA insisted on all stakeholders being present at design

Fig. 40.3   Double volume internal street acts as the "living room" of the neighborhood. *Photo* Charlotte Chamberlain & Nicola Irving Architects

meetings so as to provide richness in the debate. In particular, the contributions of the library and information services department of the COCT were extremely valuable. CCNIA held fortnightly meetings with the COCT to report on progress, present deliverables, and obtain sign-offs. Simultaneously, they attended community and business forums on weekends and evenings—first to engage, dialog, and listen to community concerns, and then, to gradually start presenting their work. The use of models (such as the one shown in Fig. 40.4) rather than drawings allowed for a rapid synthesis of qualitative and quantitative aspects of the design with intense periods of work between meetings.

The Dunoon library was completed in 2019, eight years after the Harare library. In this case, the COCT is the *subject* of the AT analysis, as their urban sustainability unit (USU, at the time part of the urban design unit) was the principal consultant. In addition to this role, the project team liaised with engineers and project managers (who were appointed by tender) as well as the libraries and information services department, who were the user-client. The *object* was to make a library that met the requirements of the user–client while also addressing the needs of the residents of Dunoon. As with the case of the Harare library, the desired *outcome* of the activity was to make a building that contributed positively to the socio-spatial development of the settlement, and the principal *artifact* was the standard architectural service as defined by SAIA.

The COCT purchased the Dunoon farm twenty-five years ago and established a new settlement to accommodate residents relocated from the Marconi Beam informal
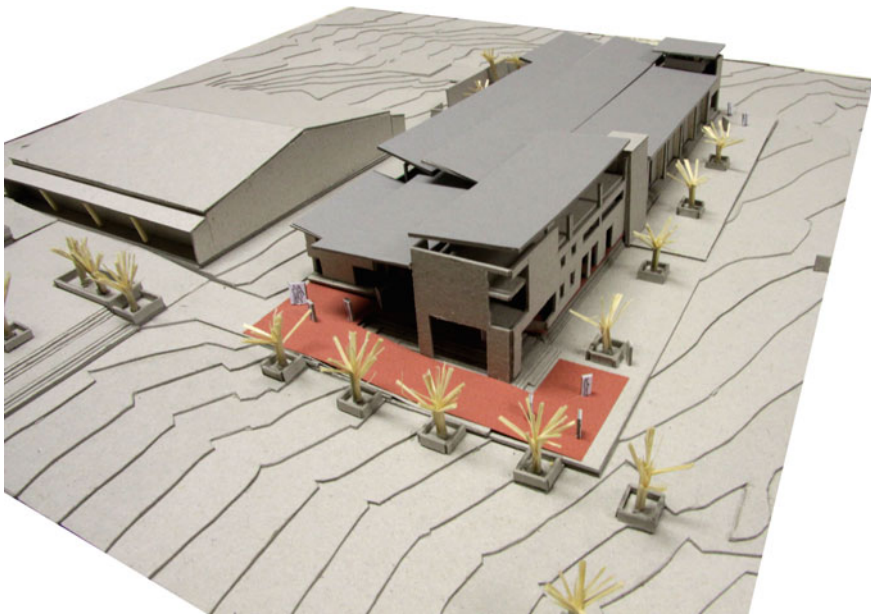

Fig. 40.4 Model of the building. *Photo* CCNIA

settlement in the suburb of Milnerton. Dunoon experienced extremely rapid informal growth—its population increasing five-fold during the past two decades—as a result of its prime location relative to employment opportunities as well as strong transport networks to the CBD. Informed by extensive research conducted by ARG Design (a multidisciplinary architecture, urban design, and town/city planning practice), the COCT planned a learning and innovation precinct adjacent to the only secondary school in Dunoon that would include a sports club, a library, and an early childhood development center.

The *community* that assembled around the making of the library included stakeholders from nearby schools and daycare centers. Their respective needs informed the order and priority of the three projects. In the design of the library, different facilities were grouped together so as to enable resource sharing with the building including a computer center, a study hall, meeting rooms, and a daycare facility that would be supported by the early childhood development center. The library accommodates children of various ages with spaces for storytelling sessions and youth programs. The project team recognized the importance of providing high-quality learning resources and the need for safe and attractive social spaces, including music listening pods and free Wi-Fi access in the building. A double-skin facade with curtain wall glazing allows for natural ventilation and views into the building and includes accessible balconies and a green wall. As seen in Fig. 40.5, the use of such advanced, high-quality construction elements in a public building is unprecedented in the settlement, and in a recent poll of residents, it was reported that the most meaningful change in Dunoon during the past five years was the construction of the library.[31]

Fig. 40.5 Advanced, high-quality construction of the library is unique in its setting. *Photo* City of Cape Town Urban Sustainability Unit

The informal rule hastened the construction of the library. Since vacant public land had to be protected from invasion, the best solution to secure land was to insert functions that addressed the needs of the community. Notwithstanding this, the project team found it difficult to be quick and adaptable in their implementation, as it deviated from the urban planning framework for the settlement. The imperative of adapting to the immediate context also influenced the design of the library, and the project team redefined their norms of what a public building in an informal settlement should be. For example, to satisfy regulations related to parking, the building was elevated to create a covered open space that allows for parking, but is mostly used for external functions such as community events and children's play spaces, as shown in Fig. 40.6. An entrance foyer and vertical circulation are placed at one end of this covered space, allowing for shared use by a future extension. Likewise, the roof of the library is accessible to residents as a viewing platform over the settlement, and has a saw-tooth steel pergola that can be enclosed to form additional internal space when the need arises.

To a large extent, the formal community participation process employed by the COCT defined the *division of labor* of the activity. During this process, the project team built on existing relationships with various community stakeholder groups and their representatives—their real clients in the community—and had to balance their needs with that of the COCT and the user–client, the libraries and information services department. In some instances, multiple meetings were held to resolve issues where the regulations that the COCT had to abide by and the needs of community stakeholder groups were at odds.
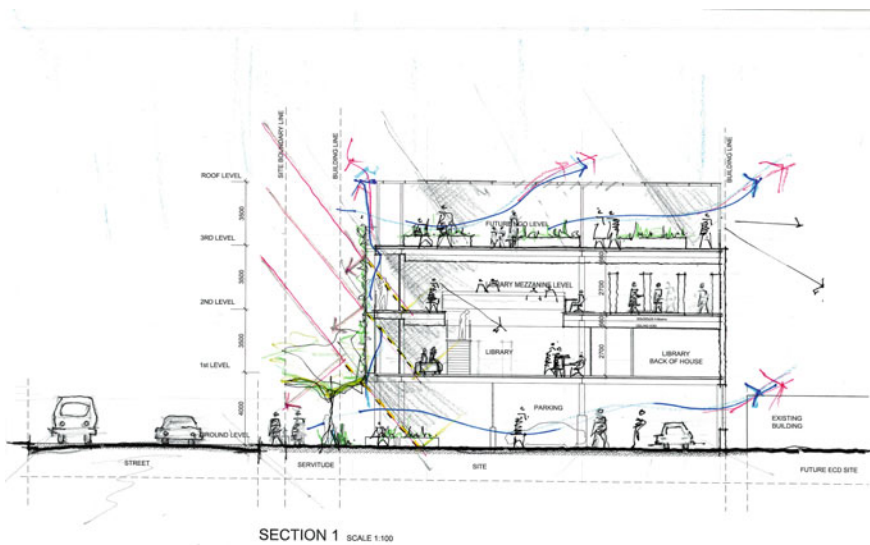

Fig. 40.6 Building is raised above the ground to create a covered, multifunctional space. *Drawing* COCT USU

Discussion

Soon after the completion of the Dunoon Library, the learning and innovation precinct was awarded the international Human City Design Award 2019 to recognize its contribution to building a more harmonious and sustainable relationship between residents and their environment, tackling urban environmental issues, and presenting a new vision through creative design.[32] As was the case with the Harare Library, the Dunoon Library is described as being a "living room" for the neighborhood that provides both a shared workspace and an extension of residents' homes. Accordingly, it stands to reason that community engagement ought to be a fundamental part of architectural practice in this context.

The analysis of the two case studies has made it evident that the standard architectural service—as an artifact employed by architects to engage in the collaborative making of buildings in informal settlements—is inadequate to engage with the socio-spatial complexity of such an endeavor. Expressed in terms of the activity system, where the relationship between the subject (architect) and object (to make a contextually-appropriate building collaboratively) is mediated by the artifact, it is clear that the standard architectural service must evolve to allow for extensive community engagement at all stages of the project. As more architects engage with the collaborative making of buildings in informal settlements, their experiences will "accumulate in the structural properties of the [artifact] as well as in the knowledge of how the [artifact] should be used."[33] In so doing, a broader mode of architectural practice that includes community engagement will also allow for adequate attention to the socio-cultural context of the activity: the community, rules, and division of labor.

It is insightful to reflect on how community engagement was accommodated in the case study projects. In the Harare Library case study, CCNIA had an agreement with VPUU, who in turn had an agreement with the COCT to facilitate the community engagement process. However, it has been shown that architects have to be a central part of this process, and in order to sustain such a broader mode of practice, community engagement must be integrated into the standard architectural service so that architects can be remunerated for the substantial additional work involved. CCNIA now includes the framing of the project and a planning exercise as a standard part of the architectural service they offer to their clients. In the Dunoon Library case study, the formal community participation process of the COCT provided the project team with guidelines for community engagement and supplemented the standard architectural service.

Notwithstanding this, it is an onerous task to sieve out, unpack, and digest the needs of a diverse client body. Furthermore, it is challenging for architects, who are accustomed to being the principal consultant in more conventional projects, to share power with professionals from other disciplines and even with community representatives. Such engagement requires "a strong sixth sense and the ability to read between the lines,"[34] as well as the ability to "put aside your ego and to develop the lexicon to engage in an unfamiliar context."[35] Another aspect of the standard

architectural service that needs to evolve is the final stage, referred to as the "close-out" of the project. Handing over a complex building to a diverse user group in an informal settlement requires much more attention, care, and time than the standard architectural service allows, where a customized "user manual" is simply provided to the client.

Conclusion

This research focuses on the rebuilding of architectural practice through community engagement rather than imposing normative architectural practice onto the informal city. Normative architectural practice finds it challenging to engage with the socio-spatial complexity inherent to the collaborative making of buildings in informal settlements. The previous research suggests that it is the structure of the standard architectural service more than the professional competencies that architects possess, that makes such engagement challenging.[36] In the preceding discussion, I have made suggestions with regards to how community engagement can be integrated into the standard architectural service. Engaging with residents of informal settlement presents architects with the opportunity to invent new roles for themselves as they navigate the socio-spatial complexity inherent in the collaborative making of buildings. These new roles will enable architects to find relevance in the informal city, to work in multidisciplinary teams and engage with residents in appropriate ways, and in doing so, to rebuild the profession from within.

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Chapter 41
Ponte City: An Architecture of Utopia, Informality, and Rebirth

Gregory Marinic

Abstract Informal settlements have emerged across the globe in response to fundamental needs for shelter, employment, and community. They grow organically and contradict sanctioned modes of land acquisition, planning, and design. Driven by both freedom and desire, transgression fuels this bottom-up form of spatial production and inhabitation. Inherent to their formation, informal settlements require transgressive actions to be established, to grow, and to thrive. What happens, then, if the inverse occurs—when a utopian vision of luxury housing evolves into an informal settlement? What can be learned when modern architecture has been radically transformed by processes of informalization and incremental design? This chapter analyzes the transformation of a Brutalist icon in Johannesburg, South Africa from a bastion of apartheid to an island of otherness. It focuses on the incremental shift of Ponte City toward accommodating residents who were spatially excluded and economically marginalized, and thus, whose only path to opportunity was through transgression. Here, daily rituals within Ponte City disregarded the formal legal frameworks of apartheid and top-down strictures of architectural design to pursue spatial agency. In place of an exclusionary "utopia," an imperfect but more inclusive heterotopia emerged by adapting Brutalist architecture from the inside-out.

Keywords Johannesburg · Ponte City · Informality · Appropriation · Brutalism · Architecture · Terrain vague

Informal settlements have emerged across the globe in response to fundamental needs for shelter, employment, and community. They grow organically and contradict sanctioned modes of land acquisition, planning, and design. Driven by both freedom and desire, transgression fuels this bottom-up form of spatial production and inhabitation. Inherent to their formation, informal settlements require transgressive actions to be established, to grow, and to thrive. What happens, then, if the inverse occurs—when a utopian vision of luxury housing evolves into an informal settlement? What can

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be learned when modern architecture has been radically transformed by processes of informalization and incremental design?

In recent years, the perception of informal urbanism has significantly broadened. Variously criminalized, ignored, neglected, accepted, embraced, and ultimately romanticized, the current discourse surrounding informality reflects the rise of more inclusive urban policies and theoretical discourses. A paradigm shift toward anti-essentialism in both planning and architecture has diminished age-old hierarchies, while offering greater diversification in urban theory. Today, informality is acknowledged as a dynamic force in which buildings, spatial occupancies, construction methods, aesthetics, and stakeholders challenge normative assumptions and regulatory frameworks. Nuances of informality may be perceived as woven into the built environment at all scales, creating alternative ways of making, occupying, and governing the city. The transgressions of informalization are acknowledged as being both empowering and generative. This view on the informal city is particularly relevant in economic terms, as transgression often carves out fertile territories for transformative change.

Urban planner Ananya Roy proposes the transnational concept of *worlding* as a way to engage a broad range of global strategies in urban development that embrace informality as a catalyzing force in contemporary urban research, theory, and production.[1] For Roy, informality is understood as a "heuristic device that undercovers the ever-shifting urban relationship between what is considered legal and illegal, legitimate and illegitimate, authorized and unauthorized."[2] Thus, architecture can take on a more critical role in contemporary urban production at the scale of individual buildings achieved through participatory actions. Viewed through the lens of informalization, Ponte City in Johannesburg, South Africa represents a flawed "utopian" building that was conceived during the apartheid era (Fig. 41.1). It began to racially integrate in the late 1970s, but slowly slid into dystopia, before transitioning into a more inclusive and stable community through organic processes of appropriation and regeneration.

Built in 1975, Ponte City was envisioned as an apartheid era model of luxury living when the surrounding Hillbrow neighborhood was exclusively white (Fig. 41.2). Throughout the 1970s and 80s, this progressive neighborhood offered tolerance for friendships and marriages that crossed the color line, freedom for blacks, and anonymity for gays during an era of widespread prejudice. Before and during the fall of apartheid in 1994, both Hillbrow and Ponte City became integrated. Ponte City embodies a tension between the purity of its Brutalist architecture and the dissolution of apartheid. Together, these forces frame a microcosm of socio-spatial conditions that impacted South Africa during a period of state-sanctioned segregation from the mid-1970s until 1994.

This chapter situates Ponte City and Hillbrow within a context of political change, white flight, decay, and racial integration. It narrates the downfall of an unjust political system and the unanticipated promise of an informalized Brutalist architecture. It analyzes the transformation of Ponte City from a racialized bastion of whiteness into an island of otherness and diversity. This study focuses on its incremental shift toward accommodating people who were spatially excluded and economically marginalized,

Fig. 41.1 Ponte City in Hillbrow, Johannesburg. *Photo* Gregory Marinic

Fig. 41.2 Utopian city-within-a-city, Ponte City. *Photo* Gregory Marinic

and thus, whose only path to opportunity was through transgression. Here, daily rituals within Ponte City disregarded the formal legal frameworks of apartheid and top-down strictures of architectural design to pursue spatial agency. In place of an exclusionary "utopia," an imperfect but more inclusive heterotopia has emerged by adapting Brutalist architecture from the inside-out.

Utopia

Ponte City is among the most iconic modernist buildings in South Africa, the tallest residential tower in Africa, and one of the largest on the entire continent. Conceived in the early 1970s as an autonomous city-within-a-city for a whites-only neighborhood of Johannesburg, Ponte City remains an enduring symbol of the intersecting forces of segregation, urban decay, and revitalization. Shortly after the building opened, a mass demonstration against apartheid unfolded with the Soweto Uprising[3] student protests in June 1976, events that would begin altering the political, social, and built environment of South Africa,[4] as well as the socio-spatial characteristics of the Ponte City complex itself.

Near the city center and rising 54 stories (Fig. 41.3), Ponte City has dominated the skyline of Johannesburg and the Hillbrow neighborhood since it was built in 1975.[5] At that time, Hillbrow was known as the Greenwich Village of Johannesburg, yet designated officially whites-only by the Group Areas Act (1950) that classified residents into White, African, Asian, and colored racial groups. The law assigned separate commercial and residential zones for each race within urban areas. Against this backdrop, the streets of Hillbrow embodied the prevailing global spirit in the 1970s of political, cultural, and social revolution with an openness to multiculturalism. Hillbrow was where bohemian whites and blacks mixed in Johannesburg's most liberal neighborhood.

Fig. 41.3 Ponte City, at far right, in downtown Johannesburg, South Africa. *Photo* Geoffrey Hancock

Hillbrow was a hub of the counterculture movement and global hippie trail providing a lifestyle in which artists, designers, musicians, writers, journalists, socialists, intellectuals, and the elite mingled freely in its cafes, nightclubs, and bookstores. A gateway for immigration from Europe, cosmopolitan Hillbrow was an island of optimism within a systematically segregated country.[6] In the short period between 1978 and 1982, the racial composition of Hillbrow was significantly altered.[7] Although legally subject to prosecution, many non-whites began moving into Hillbrow. This migration transformed the neighborhood from an officially white area into a so-called "gray area" in which different races lived together.[8] Its inclusive and multicultural atmosphere lasted until the early 1990s.[9]

Like a metaphor of transition from so-called utopia to informality, Ponte City reflected the futuristic impulses of the 1960s which gave way to the exoticism, romanticism, and nostalgia of the 1970s. Planned during the height of white confidence in apartheid and a gold-fueled economic boom, Ponte City's developers sought to capitalize on the lure of cosmopolitan Hillbrow with their plan for a high-density, mixed-use tower sited on a small urban plot. The avant-garde Brutalist complex was marketed with countercultural aesthetics and a contemporary lifestyle. As its name suggests, Ponte City was indeed conceived as a city-within-a-city. Its labyrinthine podium contained upscale shops, cafés, a bowling alley, swimming pools, tennis courts, and a concert venue.[10] The complex housed 464 units configured with saunas, conversation pits, and rooftop terraces.

For Ponte City, architects Mannie Feldman, Manfred Hermer, and Rodney Grosskopff designed a cylindrical plan that maximized views and daylight while conforming to an irregular site. On the one hand, the Brutalist design of Ponte City was avant-garde and state-of-the-art in its time. On the other hand, the long-standing socialist principles of modernism were used to spatialize an unjust political system. The hollow tower (Figs. 41.4 and 41.5) met building codes and apartheid era specifications for racial separation, as well as regulations that set bathroom and kitchen windowsills at 1.8 m or higher so that black staff members could not see into white apartments.[11] Whites occupied outward-facing apartments with views of the skyline, while their black servants were housed in modest support areas with sleeping quarters facing the inner core.[12] Complying with the Group Areas Act, only whites were legally allowed to permanently reside in Ponte City, yet members of the non-white building operations staff also lived on site.

Informality

Although the 1960s saw an unprecedented boom in high-rise apartment construction in Hillbrow, unit stock began exceeding demand in the 1970s due to a faltering economy and growing political instability.[13] White flight drained the urban core of Johannesburg while exclusionary Ponte City slowly became an unlikely generator of racial integration. As demand fell from whites, its management office began renting apartments to people of Indian and mixed-race ancestry under assumed names of

Fig. 41.4 The hollow core. *Photo* Gregory Marinic

Fig. 41.5 Looking across the hollow core. *Photo* Gregory Marinic

Greek, Lebanese, Jewish, or Portuguese origin.[14] Landlords claimed that they could not determine the difference between various racial groups since many mixed-race people and South Asians appeared to be of Lebanese or European descent.[15] Prior to the late 1970s, few landlords would have risked renting property to blacks in segregated white group areas such as Hillbrow.[16] Furthermore, a more diverse influx of European immigrants lured by the South African government's liberal immigration

policy for whites began settling in Hillbrow.[17] In 1980, the Minister of Community Development noticed this diversity and declared the neighborhood a "scandal and slum." In short, integrated Hillbrow had become antithetical to the racist policies of the South African government.[18]

During this time, whites in the densely populated inner-city districts of central Johannesburg—most notably in Berea, Yeoville, and Hillbrow—increasingly moved to distant suburbs north of the city.[19] Property values in central Johannesburg correspondingly plummeted. The inflexibility of the apartheid system and shifting social norms created unique challenges for the massive and difficult to adapt Ponte City. In 1986, the abolition of the Pass Laws that segregated the population, managed urbanization, and allocated migrant labor resulted in an influx of non-whites into Hillbrow. Many of the new tenants were mixed-race families, low-income laborers, and undocumented immigrants who sought less scrutiny from the unjust apartheid system. At the same time, other new residents included persons engaged in illegal activities.

Only ten years after it was built, "utopian" Ponte City spiraled into a rapid decline. The surrounding Hillbrow neighborhood became widely known through urban legend as home to Johannesburg's underworld. By the 1990s, drug dealers, criminals, and prostitutes used Ponte City as a base. Built to house around 3000 people, at the height of its so-called "hijacked" status, Ponte City was home to 10,000.[20] Property management neglected repairs and the building quickly devolved into a vertical slum. This city-within-a-city had radically transgressed its intended uses as appropriated parking decks became brothels, penthouses evolved into drug dens, and the tower core morphed into a public dumping ground. As a symbol of both violence and decay, the tower core came to be known as the unfortunate site of horrific accidental falls and suicides.

Even amidst such conditions, the lesser-known backstory confirms that Hillbrow had incubated a well-established, law-abiding community of multiracial residents spanning a diverse range of socio-economic classes. In the mid-1990s, the eerily faded grandeur of Ponte City began appealing to an emerging creative class (Figs. 41.6, 41.7). Large flats and empty retail spaces offered an ideal environment for artists and designers with limited resources to establish live-work studios and small businesses.

In his book *Taming the Disorderly City*, Martin Murray examines tensions of race and class in post-apartheid Johannesburg, as well as the ensuing struggle for right to the city. By the early 1990s, the municipal government of Johannesburg had largely abandoned residential planning to market forces.[21] In the resulting power vacuum, real estate developers and the urban poor were increasingly in opposition for control of the city. On the one hand, the decline of white residents and increased white out-migration after 1990 elevated vacancy rates and allowed residential structures to desegregate. On the other hand, the racially diverse but poor population was profoundly impacted by deterioration of the inner-city built environment.[22]

After 1994, a mass exodus of wealth from the urban core to the northern suburbs intersected with a simultaneous influx of immigrants from Nigeria, Zaire, Congo, and Zimbabwe.[23] Unlike in the Global North, decades of disinvestment and white flight resulted in neither a depopulated Hillbrow nor a vacant Ponte City.[24] Rather,

Fig. 41.6 Ponte City, central core; *Photo* Gregory Marinic

Fig. 41.7 Eerie grandeur, Ponte City; *Photo* Gregory Marinic

the neighborhood transformed to support informal socio-economic activities that continually attracted rural migrants to Ponte City. Nevertheless, rising crime in Hillbrow led to more tension and blame was placed almost exclusively on the migrants. The situation had become so degraded that most of the new arrivals found Hillbrow to be much worse than the segregated black townships that they had left.[25] Although the townships offered an established support system to residents, Hillbrow and the

informalized Ponte City provided new opportunities. For some residents, dystopian Ponte City offered greater economic mobility, while for others, it granted anonymity and access to rights denied elsewhere in South Africa.

Rebirth

A surge in illegal activities exploded by the late 1990s as the South African prison system became overcrowded and started to fail. Over 59,000 crimes were reported in Hillbrow from 1999 to 2001.[26] Responding to public pressure, the national government requested proposals to increase its prison capacity. In February 1998, the Minister of Correctional Services announced that Ponte City would be converted into a prison.[27] Shortly after the announcement, public pressure rallied around Ponte City to ultimately sink the plan due to its philosophically awkward premise. The failed prison proposal was a pivotal moment in the history of Ponte City, a turning point that shifted expectations for what the complex could become in future.

In 2001, the London-based Kempston development group purchased Ponte City with plans to refurbish it. Managing agents worked to rehabilitate the complex from one of the most notorious places in South Africa into a respectable and integrated middle-class community.[28] Ponte City was subsequently transformed into a safe, low-rent apartment building with a high-occupancy rate. In 2007, developers David Selvan and Noor Addine Ayyoub purchased the building and re-envisioned Ponte City in its former glory.[29] They evicted 1,500 residents, stripped floors 11 through 34, and began a complete renovation of units with fantastical concepts. Less than a year later, the project was abandoned and left unfinished.[30] Ponte City remained in a state of ruin as its infamous core continued filling with building rubble and trash.

In 2009, Kempston reacquired the building and sought to attract new residents. By late 2011, strict security protocols were implemented in the refurbished tower with its new elevators, cybercafé, and fast-food restaurants. Attracting solidly middle-class tenants, the new Ponte City was over 90% occupied with a multiracial population including South Africans, Congolese, Zambians, Nigerians, Zimbabweans, and others.[31] Today, this iconic building has evolved through processes of informalization into a diverse community of professionals, students, artists, and families ranging from service industry workers to politicians. Yet today, the rich and poor of Johannesburg are even more divided by de facto segregation in luxury high-rises and gated communities, islands of wealth intermingled amidst vast swaths of urban poverty.[32]

Reflecting

The remarkable history of Ponte City and its transformation—from Brutalist icon to informalization and rebirth—demonstrates the morphogenic processes in which self-organized urbanism operates across the Global South. Like the formal city, where

the urban plan precedes the architecture, Ponte City was created by top-down legal frameworks and design protocols. However, like informal urbanization, the transformation of Ponte City during the apartheid era was not authorized by the state. Rather, a building-scale process of incremental appropriation accelerated as external and internal forces reshaped the complex into a place of resistance and protest. Here, countless acts of transgression participated in expanding social justice.

Shifted occupancies remade a formal, private, and privileged space into an informal, semi-public, and equitable one. A building-based process of deformalization, whether it was temporary or indeterminate, created socio-spatial relations distinct from those previously embodied within the same spaces. Architects and designers should not ignore these important socio-spatial reconfigurations. As people around the globe face increasing state-sanctioned repression, building-scale actions may be among the most important, though seemingly minor, forms of collective resistance. Ponte City represents adaptive reuse as an expander of rights to the city that operates like the informal city, but at the building-scale.

Terrain vagues have always been appropriated by marginalized communities to serve emergent means. Viewed through the concept of terrain vague, Ignasi de Solà-Morales proposes that when architecture projects its desires onto vacant space, violent transformations strive to dissolve the uncontaminated and organic magic of obsolescence.[33] Contemporary South African society has become desensitized to the violent transgressions and post-apartheid abandonment that overtook buildings like Ponte City. These buildings have permanently lost their original functions, and thus are often perceived as both subversive and dystopian—as apocalyptic cities. Nevertheless, decline created the foundation upon which a fledgling ethno-socio-economic heterotopia could be constructed. Abandonment allowed people to appropriate space, both public and private, and to reconfigure that space to meet their own needs.

Blending the peripheral fringe of Solà-Morales' terrain vague with Michel Foucault's heterotopia, "…another real space, as perfect, meticulous, and well-arranged," Ponte City shows how utopias are, in fact, flawed illusions. The Ponte City of post-apartheid South Africa, a heterotopia built upon the ruins of an architectural utopia, did not conceal such difference, but rather, highlighted the social fragmentation and economic polarity of neoliberalism. Nevertheless, it shows that mobilization, vitality, entrepreneurship, and economic prosperity can thrive within unlikely conditions; informalization makes space to incubate new opportunities. While such processes failed to prevent Ponte City from devolving into a "slum," informalization—or perhaps more precisely, *deformalization*—of this massive building contributed to socio-spatial diversity at the urban scale. In this sense, Ponte City offers not only a way to identify these informal morphogenic processes, but an opportunity to understand how self-organizing practices develop within appropriated buildings. It is important to recognize that informality is not only an urban process, but rather, a mode of production with varying scales. Thus, Ponte City shows how building obsolescence, wherever it may happen, can harness the dynamic power of informal urbanism.

Informality implores architects to reflect on the ways in which participatory architecture can more critically engage with everyday life. In South Africa and around the

world, the evolution of Ponte City is popularly viewed as a critique of apartheid, and yet, it can be more broadly situated as a critique of the neoliberal city. The decline of Ponte City—itself conceived by architects as a city-within-a-city—compels us to rethink its history not as an autonomous city, the other city, or an anti-city, but as a city of the masses. The informalization of Ponte City can be viewed as a new frontier for architectural experimentation in which intersectional conditions transform buildings from enclaves of exclusion into places of inclusivity. For architects, unlike a site of invention, Ponte City represents a site of learning about socio-spatial possibilities and less formal approaches to architecture and urbanism. Therefore, the analysis of Ponte City should no longer fixate on its Brutalist form or fetishize its decline. Instead, Ponte City compels us to ponder the social, political, and economic conditions that created a more inclusive community through organic processes. A durable and fortress-like Brutalist architecture, often derided for its inflexibility, became an unlikely yet robust and resilient host for societal change.

The transformation of Ponte City allows analogies and parallelisms in the broader production of informal urbanism to be reassessed in terms of scale. The notion of leaving space unplanned and unprogrammed in a conventional architectural project often faces many obstacles, from resistance by the client to noncompliance with normative expectations. Perhaps, though, as Solà-Morales asserts, such blurriness is precisely what urban space needs to remain relevant across generations. Terrain vague, heterotopias, and other spaces in the urban context point toward the dynamic potential of transgressive spatial forms. Architecture, therefore, needs indeterminacy. The dramatic transformation and unlikely rebirth of Ponte City provokes the question: Can inflexible architectural practices ever hope to remain relevant as people, culture, and the city continually change?

Yet, that is only part of the Ponte City story. Its socio-spatial rebirth can also be viewed as a metaphor for Brutalism itself, an architecture of utopia that encountered a turbulent history to be reassessed and in a sense, reborn. Pioneered in Europe and India by Le Corbusier with his proto-Brutalist experiments, Brutalism flourished in the 1960s and 70s as an architectural movement that preserved and rethought the heroic aspects of modernism. Le Corbusier and others, most notably—Alison and Peter Smithson, Paul Rudolph, Marcel Breuer, and I. M. Pei, to name only a few— experimented with new ways of using concrete, often with a bush-hammered effect, as well as a "truth to materials" philosophy that extended the fundamental principles of modernism. Reynar Banham famously dubbed the school "the New Brutalism," a movement which he claimed "made the whole conception of the building plain and comprehensible. No mystery, no romanticism, no obscurities about function and circulation."

Brutalism is often at once viewed as the apogee and nadir of twentieth century architecture—from its origins as a socio-political catalyst and widespread use across the globe, to its broad rejection by the public. As such, the Brutalist experiment closely parallels the emergence and decline of Ponte City. By the early 1980s, Brutalism was significantly diminished apart from a few areas in central and eastern Europe—Poland, Czechoslovakia, Yugoslavia, Romania, and the Soviet Union—where it continued developing and flourishing until the fall of the Eastern

Fig. 41.8 Looking up, Ponte City; *Photo* Gregory Marinic

Bloc. Like Ponte City, Brutalism rose and fell, but has since been reassessed and rehabilitated by residents, artists, architectural critics, and twenty-first century social media enthusiasts worldwide.

Conclusion

The monolithic and hegemonic architecture of Ponte City remains intact, albeit in a notably altered state (Fig. 41.8). Less than 10 years after opening, obsolescence led to processes of deformalization and socio-economic desegregation that carved out space for a new community to emerge. The building, therefore, can be viewed as an unlikely laboratory for social justice, a Brutalist form that evolved into an informal settlement to create a unique platform for socio-spatial change. Acts of appropriation leveraged the advantages of both an iconic architecture and informality to participate in remaking the city itself. Urban planners, architects, citizens, and community advocates working in informal settlements have much to learn from comparing processes of slum-integration with the decline, appropriation, and regeneration of existing buildings. Like a memory of 1970s countercultural Hillbrow, a new bohemia—an imperfect but more inclusive heterotopia—has emerged as a microcosm amidst the heroic architecture of Ponte City.

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Chapter 42
Urban Housing in Nairobi: Expectations and Realities of Densification in the Middle- and Low-Income Sectors

Edwin Oyaro Ondieki

Abstract The population of Nairobi has grown 12-fold since 1963, when Kenya attained independence, and this has greatly spurred urban expansion. Much of this growth has taken place in the housing sector, which has witnessed increased and uncontrolled development that has become a challenge to the built environment. Much of this expansion has happened outside of formal development frameworks because of social, economic, and political factors in the housing processes. The case of Nairobi is used to explore housing densification in the middle- and low-income sectors through a review of the interests that shape this process. The aim is to explain how different interests converge to shape the housing sector in the middle- and low-income sectors, and to suggest possible interventions to manage urban densification and to develop safe and livable cities in Kenya and across Africa.

Keywords Densification · Urban planning · Housing · Interests · Housing investment

This chapter is a review of urban densification of housing in cities of developing countries, using Nairobi as a case study. The available literature on densification in cities of developing countries shows that it is informal and not homogeneous.[1] The debate on the *compact city* is generally in favor of densification based on the argument that it offers environmental, social, and global sustainability benefits.[2,3] Proponents of this view make an argument from a sustainability perspective of resource conservation and waste minimization. Under this view, the concentration of urban activities in a compact city reduces energy consumption, contributes to conservation, and reduces waste mainly on matters related to carbon emissions.[4] Globally, this view makes sense in terms of the benefits of densification, but from a more localized perspective, specifically that of developing countries, the justification for densification is based on urban demographics like economic, social, and political considerations, and less on other important factors such as the environment.

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Densification of urban areas has taken place either purposefully through planning strategies or spontaneously as a survival strategy or for profiteering. Models such as high-rise, high-density, (re)development, concentrated decentralization, and traditional infill have been deployed formally, but none of these has been identified as offering a perfect fit for a sustainable form of densification in developing countries.[5] Factors such as the rate of demographic change, levels of economic and social development, and national and urban politics vary greatly in different countries and cities and thus differently influence the form of cities. Research on urbanization in Africa indicates the nature of urban growth in African cities; the processes, outcomes, and interests of the factors of urban density must be thoroughly understood within individual cities and state contexts because they are not homogenous.[6]

This exploration is designed as a case study that adopts a qualitative approach for data collection and analysis. Its presentation strategy is descriptive and explanatory. It uses three estates in the city of Nairobi as a detailed study area to explicate the diversity of densification in Nairobi. This chapter is organized in three parts, beginning with the contextualization of densification in African cities. It then reviews densification in Nairobi through an analysis of the history of development, changes in demographics, housing morphology, and socioeconomic activities of selected estates. Lastly, it discusses the underlying processes and interests that drive urban densification including social, economic, and political factors.

Densification in African Cities

Densification in African cities is happening rapidly due to fast-changing urban population demographics that has resulted in shifting forms and structures of cities. The trends of densification are not well clarified on the continent due to challenges of accessing reliable information and/or a lack of densification policies.[7] In many African cities, densification happens outside of planning regulations, especially in low- and middle-income areas where a majority of urban residents live.[8] It is estimated that about two-thirds of Africa's urban population lives in poverty in congested informal settlements. These numbers will increase substantially with projected population growth in the coming years.[9] This will have negative effects on densification policies and the effectiveness of policy instruments. Urban densification will, therefore, continue to emerge spontaneously in many cities, leading to chaotic neighborhoods.[10]

Inadequate environmental infrastructure and services, along with the inability of governments to bring the majority of urban households into a range of effective demand which would be capable of improving the coverage and maintenance of urban infrastructure and services, remain challenges and consequently affect the densification of residential neighborhoods.[11] The nature of politics—its diversity and changes in ideological focus—has greatly influenced urban policy, planning, and management before and after independence in many countries. Some countries also suffered intermittent civil strife in the post-independence period, which has had

a substantial effect on the growth pattern of settlements in cities.[12] The adoption of neoliberal economics in the 1980s by African governments and the rise of powerful local and foreign private sectors further influenced the form and structure of urban densification.

Furthermore, poor urban governance undermines efforts to implement government planning policies, which manifests in the physical and material city.[13] It is suggested that the challenges of densification in African cities can be tackled first, with a thorough understanding of the nature of urban growth and its processes, outcomes, and interests within the context of individual cities and states.[14]

Densification in Nairobi

Urban planning for the growth of Nairobi dates back to 1906, when it was established as the capital of the new country. Zoning was introduced as an urban planning measure to manage development density. At the time, it was based on racial segregation and controlled urban migration15.[15] After four decades, Nairobi had developed substantially and required a new plan. In 1948, a comprehensive development plan was created with the intention of raising Nairobi's status into a modern and industrial city.[16]It adapted a Garden City concept for residential zones using the neighborhood units planning principle.[17] It designated low-density zones for Europeans, while Asians and Africans were assigned middle- and high-density zones, respectively.

When Kenya attained independence in 1963, the segregation policy and movement restriction were abolished.[18] The city began to experience unprecedented growth, mainly due to rural-urban migration and natural growth. Population growth exceeded 4%, which led to several challenges such as insufficient infrastructure and services. This prompted the city to review its growth strategy, culminating in a new master plan in 1973.[19]

An analysis of reports of Kenya's population and housing census indicates that the population of Nairobi grew at the rate of more than 4% from 1963 until the end of the turn of the millennium. From then on, it has maintained an annual growth rate of more than 3.8 %. The population of Nairobi has grown from 361,000 people in 1963 to 4,397,073 in 2019, and its population density has increased from 518 people per km^2 to 6317 people per km^2.

The city's rate of growth is faster than planning policies are capable of moderating, despite periodic revision of development densities in various planning zones. Impatient investors, aware of the varied potential for redevelopment of various city zones, have negotiated with planning authorities and have been allowed to vary development requirements. Others have taken advantage of lax enforcement of planning guidelines to define their own development agenda, defeating the intentions of the city's growth strategy and creating chaotic residential neighborhoods.

Densification in Residential Neighborhoods

Residential development in Nairobi across all income sectors faces a number of challenges that confound the growth of the city.[20] The residential sector has been noted as the underbelly of Nairobi's urban development. It is flouted by social, economic, and political interests, which has created uncontrolled densification in residential neighborhoods. This affects all income sectors but is worst in low-income areas. Developers have preconceived notions about housing forms suitable for urban residents, which they construct through negotiations, coercion, and other forms of manipulation to achieve their desired densities. However, in informal neighborhoods, densification is spontaneous, as most of these areas are considered to be outside the jurisdiction of formal planning control.[21]

Housing in Nairobi is substantially supplied by the private sector. The majority of city residents, 79%, live in private rental housing, 5% occupy their own houses, and the rest live in other forms of housing, such as institutional housing.[22] The majority of renters, who are poor, live in low-income settlements and slums where housing is affordable. These areas are underserved in terms of infrastructure and services and consequently, the quality of housing is poor and congested. The city government lacks the moral authority to enforce building regulations in these areas because of the complexity of dealing with the urban poor. As a result, the private sector, out of the need to profit from the huge housing demand, has increasingly intensified housing development over time, making it impossible to achieve the sustainable densification envisaged in compact city debates.

To explicate the nature of residential neighborhood densification in Nairobi, three selected estates that have different income demographics are analyzed. Kilimani was once a high-income estate but has been downgraded into upper middle income because of the intensification of neighborhood developments and activities. Donholm and Pipeline are middle- and low-income estates, respectively (Fig. 42.1).

Kilimani Estate

Kilimani Estate covers an area of 1.2 km^2 (Fig. 42.2) and is part of the larger Kilimani administrative and electoral ward of Nairobi County, which is 9 km^2. It had a population of 5566 people and 1700 households in 2019. Its population density is 4638 people per km^2. The estate's history and development patterns are intertwined with the larger Kilimani, which was planned as a residential area during Kenya's colonial era. It was a European-only settlement, in conformity with the segregation policies of the colonial British administration. The typical residential building was a single-family detached dwelling with a stand-alone servant's quarters occupying three quarters of an acre.[23] After independence in 1963, the law on racial segregation was dropped, and well-resourced Africans and senior civil servants took residence
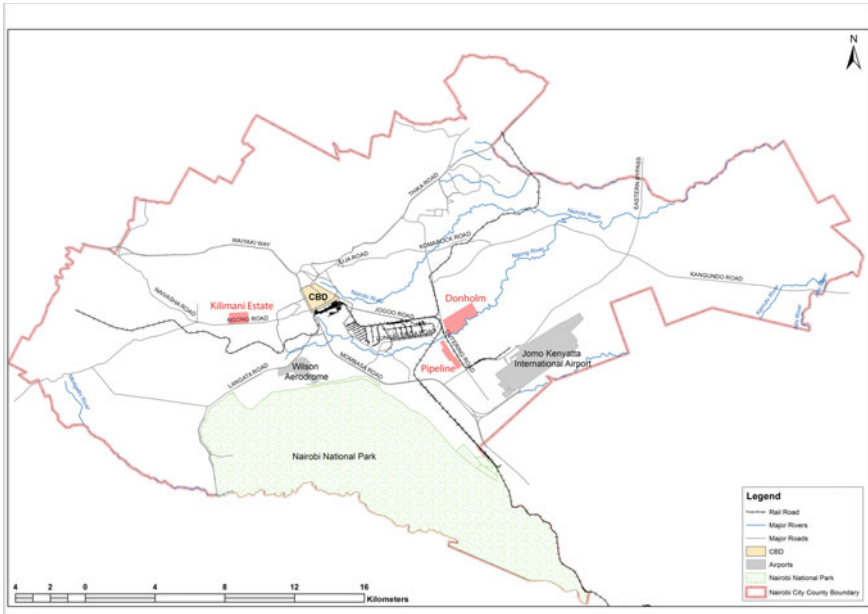
Fig. 42.1   Location of study sites in Nairobi. *Drawing* Edwin Oyaro Ondieki

Fig. 42.2   2020 Map of Kilimani. *Diagram* Edwin Oyaro Ondieki (over Google Maps, 2021)

in Kilimani, maintaining the historical character of these residential areas up to the turn of the millennium.

Thereafter, Kilimani gradually transformed into high-rise mixed-use developments such as apartment housing complexes and commercial blocks (Fig. 42.3). In the last decade, the densification of Kilimani has grown exponentially, mainly because of the introduction of liberal monetary policies in 2003 that spurred unprecedented growth in all sectors of the economy. Consequently, the middle-income class increased, and so did the demand for high-end apartments in close proximity to the CBD. Due to pressure from developers, the city government revised zoning regulations and allowed the development of apartments and other facilities in Kilimani as well as other high-income neighborhoods. There was also an opportunity for investors to seek preferential consideration to develop beyond the legal limits, which was granted to some developers under unclear circumstances. It is no wonder that later developments have exceeded the four-story limit, and some are currently at 16 levels.

Kilimani Estate is about 5 km from Nairobi CBD along major transport routes such as Ngong and Argwings Kodhek roads. The infrastructure and services are well developed. Residents rely on private transport, but many others who earn a livelihood from commercial activities in the area use public bus transport. Social and economic activities in the estate are distributed in various sections with different intensities. Most commercial developments that offer spaces for offices and retail are on plots that front the main transport routes. These include office spaces, car bazaars, retail, banking, hospitality, and education. Newer apartments and other forms of housing occupy the inner areas of the estate.

Fig. 42.3   Section of Kilimani area. *Photo* Edwin Oyaro Ondieki

Donholm Estate

Donholm Estate is part of the 18.4 km² Donholm Dairy Farm that was established at the turn of the nineteenth century by a British settler. The farm exchanged ownership through the law of compulsory acquisition after city boundaries were extended in 1963 to encompass the eastern sections of Nairobi. It was subdivided and allocated to various organizations and individual developers for the purpose of housing development. The allottees of Donholm, an area of 3.1 km² (Fig. 42.4), created a holding company, Continental Developers, with the aim of developing housing. This company has played a major role in the development of the Donholm area up to now.

Donholm Phase 1 (currently referred to as Old Donholm) was developed by Continental Developers as a housing scheme with the requisite infrastructure and sold off. They built bungalows on plots measuring 0.075 ha. Thereafter, development in Donholm was carried out by corporate organizations, which bought sizable blocks of land from Continental Developers and built low-rise and mixed type housing estates such as Greenfields, Sunrise, Green Span, and Harambee Sacco Society. In the other parts of Donholm, Continental developers subdivided the plots into much smaller parcels of about 0.025 ha and developed minimal infrastructure. They sold off these parcels to individual developers, most of whom overdeveloped them by building mixed developments against planning guidelines (Fig. 42.5). These areas include Donholm Phase 8, sections of savannah, and plots along the Donholm-Savannah Road spine. Here, developers have invested in high-rise blocks four to seven floors high that accommodate business premises on the ground floor and apartments on the other floors.

Fig. 42.4 2020 Map of Donholm. *Diagram* Edwin Oyaro Ondieki (over Google Maps, 2021)

Fig. 42.5 Section of Donholm Estate. *Photo* Edwin Oyaro Ondieki

Donholm is administratively known as Upper Savannah and forms part of Savannah Sub-location, and it is an electoral ward for Nairobi County. It is about eight kilometers from the CBD. It abuts Outer-Ring Road and Savannah Road traverses through it. In 2019, its population was 53,904 people, with a population density of 17,553 km^2 and 15,415 households.

Infrastructure in the older section is in good condition, while in the newer sections, it is under development. There are many formal and informal socioeconomic activities, with a greater concentration of commercial activities along Savannah Road. They comprise educational, wholesale, and retail, hardware outlets for building materials and equipment, second-hand goods, workshops for various trades, garages, eateries, bars, and green groceries.

Pipeline Settlement

Pipeline Estate occupies part of a colonial-era sisal farm that was taken over by the government of Kenya in the early 1970s for the purpose of expanding industrial production. The land was subdivided into portions of about 100 acres allocated to local industrialists that were interested in expanding their business. A number did not take up the opportunity, and the land lay idle for a long time. Part of it was encroached upon by squatters and became an extension of the Mukuru slums, and the rest was sold off to land speculators who subdivided it into plots measuring approximately 0.024 hectares and sold these off to individuals for residential purposes.

Pipeline Estate is characterized by tenement blocks that rise to nine floors. Their footprint exceeds provisions of planning guidelines by 100%. They mainly offer one-room accommodations with shared amenities such as toilets, showers, and water

points. They have maximized room provision per floor. For example, a typical tene-ment accommodates 14 rooms per floor, thus 14 households. Assuming an average of three people per household in Nairobi, each floor could accommodate about 42 people. The entire tenement with nine floors would house 378 people in 126 house-holds. It is not a surprise that Pipeline is the most densely populated area in Kenya, according to the 2019 population census.

Infrastructure in this estate is poor, mainly because it came after the development of tenements through the investors' initiative. The area was not planned for resi-dential development by the local government edwin and was therefore excluded from its infrastructure development process for a long time. However, in the last five years, and following the changes in national governance structures after the 2010 constitu-tional changes, this has changed. In the immediate neighborhood of the settlement, roads and other infrastructure are in good condition, and some of these are accessible to the Pipeline Estate residents.

Pipeline Estate covers an area of 0.73 km^2 and is an electoral ward of Nairobi County. In the census enumeration, it was grouped together with *Kware ward,* which is indistinguishable from Pipeline. The two wards cover an area of 1.6 km^2 with a population of 166,517 people and 66,811 households; a population density is 106,445 people per km^2 in the 2019 national census. Through extrapolation, Pipeline Estate could have had a population of 76,000 people and 30,500 in 2019. Pipeline and *Kware wards* are the most densely populated neighborhoods in Kenya.

Pipeline Estate is located about 12 km from the CBD and a walking distance from Nairobi's industrial area, the national airport, and other business hubs (Fig. 42.6). Therefore, it is in high demand by the low-income class that desires to live in close proximity to their place of livelihood. There are numerous formal and informal social and economic activities in the estate. These include educational and health

Fig. 42.6 2020 Map of Pipeline Estate. *Diagram* Edwin Oyaro Ondieki (over Google Maps, 2021)

Fig. 42.7 Section of Pipeline Estate. *Photo* Edwin Oyaro Ondieki

(privately provided), retail, eateries and bars, metal and wood workshops, hardware shops, salons, and tailoring. Others are green groceries, hawking of new and second-hand goods, water vending, and food hawking. These businesses are carried out in premises, in makeshift structures, or laid out along the road (Fig. 42.7).

Issues and Interventions

The foregoing discussion of the cases has examined a number of issues under the following categories: population demographics, socioeconomic, and political and governance (Table 42.1). Based on different neighborhoods, an overview of the underlying issues causing disorderly densification are highlighted, and interventions that can create order in the city discussed.

Socioeconomic Factors

Densification in Nairobi has mostly been driven by economics (Table 42.2). First, the fast-growing urban population has raised the demand for housing in the middle- and low-income sectors. Second, the demand for housing has created a profitable housing

Table 42.1 Development morphology of estates

	Kilimani	Donholm	Pipeline
Development guidelines and realities	Is within zone 4 of development regulations that provide for: • Residential (four story apartments are allowed) • Ground coverage—35% • Plot Ratio of 75%. • Minimum allowable plot size—0.05 ha (0.25 acres) **Reality**: • Mixed use developments. Commercial and apartment blocks • Developments far exceed planning guidelines • Presently, it is common to find town houses, apartment blocks, and commercial buildings of various heights, forms and dispositions. Blocks with heights ranging from 12 to 16 floors are currently a common phenomenon	Is within zone 8 of development regulations: • Mixed residential development • Ground coverage—50% • Plot Ratio—75% • Development type-mixed housing development; flats, maisonettes and bungalows **Reality**: • The estate is interspersed with a number of residential typologies: maisonettes, bungalows, apartment blocks, and mixed-use commercial buildings • Mixed-use development is predominated by residential high-rise apartments. This has happened in the past 20 years. It started with four levels, in keeping with residential height, and gradually rose to the current seven levels	Zone status is undetermined: initially industrial **Reality**: • Mixed use tenement developments. Predominantly residential with the ground floor used for commercial purposes • The ground coverage is 100% with a light well at the center. The blocks are mainly one level walk-ups and abut each other, most have only one frontage to the main road on the narrow side of the plot

market that is operating at the fringes of fair economic practice. This has resulted in unplanned intensification in housing neighborhoods that is unsustainable. Essentially, this resulted from the country's poor economic performance and subsequent neoliberal economic policies. These policies bolstered the role of the private sector in service provision, which it commodified for profit. Balancing the housing needs of the urban poor and the interests of private investment in a neoliberal economy is a challenge. It would require massive investment in infrastructure and housing in the middle- and low-income settlements, which is not feasible for Kenya's government in the near future.

Densification within the middle-income housing sector is transforming fast in its typology mainly because of the value of land and the increased demand for housing. Accordingly, households cannot afford much space anymore, as exemplified

Table 42.2 Drivers of densification/intensification

Factors	Kilimani	Donholm	Pipeline
Social	*For the investors/buyers*: • Household income *For the residents* • High demand for exclusive housing from an increasing upper middle class • Lifestyle preferences • Population pressure—diminishing available land	*For the investors/developers*: • Home ownership through self-building • Investment for household income. It is also a retirement income. Official retirement benefits are little and unreliable. Further, a majority of Kenya's workforce is in the informal sector and does not make savings in retirement schemes, opting instead to invest in housing and other businesses for retirement income *For residents*: • Growing demand for the type of housing offered by an increasing middle class.	*For the investors*: • Source of household income and guaranteed income in retirement *For the residents*: • Location is a walkable distance to places of livelihood • Population pressure—rural to urban migration and natural urban population growth.
Economic	*For investors*: • Profit and reinvestment from both rental and sale income. • Intensification of developments to increase on profit margins due to high demand for prime area • Profiteering from land speculation and escalating land costs	*For the investors*: • Profit and reinvestment from both rental and sale income. • Rental income mainly from apartments. Apartments are built outside development guidelines and cannot be sold to interested households under the sectional properties law	*For the investors*: • Profit and reinvestment of rental income. Return on investment is higher than from other forms of housing *For the residents* • Affordable housing when considered against their income
Political and governance	• Easing of development regulations due to investors' pressure • Favored in public infrastructure and services • Inequity in development approval processes	• Lax enforcement of development control due to political influence and monetary gain, among other vices, has allowed illegal development of apartments • Strategy of increasing housing stock to cater to increased demand	• Lax enforcement of development control to allow the increase of housing stock in the low-income sector • Political influence • Maintenance of status quo for political advantage

by the high-rise housing blocks. For example, new apartment blocks are filling in old low-rise housing in the middle-income suburbs, while in other cases these new apartments are replacing them, resulting in increased housing density. Due to the tacit embrace of free-market enterprise, the private sector negotiates and is granted favorable terms for housing density in high-income neighborhoods. This practice is exacerbated in neighborhoods that are close to the CBD, such as Kilimani. In low-income neighborhoods, densification is at the whims of developers. In all these cases, the underlying motivation is capital gain. Other factors, such urban order and environment sustainability, are not a consideration.

Overall, the trend in housing has been the rapid increase of densification in various forms to accommodate as many housing units as possible to maximize on profit. Most neighborhoods that are close to the CBD and other places of income-generating enterprise have witnessed increased land value, making it economically sensible to increase the number of households to achieve value for investments.

Within the city of Nairobi, and as affirmed with the three cases, forms of neighborhood densification can be diverse within the same—and even among different—demographic groups. There is a need for scholars and African policymakers to develop their own understanding of urban densification because theories from elsewhere will not explain African urban development paradigms.

The poor performance of Kenya's economy is a reflection of Africa's economies, which are similarly witnessing an increasing poor, urban population, which can only be accommodated within informal settlements that are experiencing great intensification. Africa's economies need to grow, creating more and better-paying jobs and opportunities for formal investments, while enabling the state to intervene in urban housing, especially in the low-income sector.

Politics and Governance

Nairobi has been unable to meet the housing needs of a majority of its residents because this is perceived as a lower priority within the city's hierarchy of development needs. This can be attributed to the fact that the low-income population cannot assert effective influence on the city's leadership and that of the country at large. Both at the national and city level, political will has been lacking in terms of the plight of housing and infrastructure investment for low-income populations. There is always the excuse that other extraneous factors impede any such effort.

As noted in urban literature, solutions to unregulated densification in neighborhoods can be sought from the enforcement of urban planning mechanisms through adherence to principles of good city governance such as accountability, transparency, responsiveness to public needs, effectiveness, efficiency, and observance of the rules of law. There should also be increased and more equitably distributed resources for infrastructural investment, especially in poor and congested neighborhoods. An inclusive urban planning process that seeks the broad participation of the urban

community should be encouraged. Policies drawn from such an engagement will offer opportunities for urban sustainability gains.

Conclusion

The uncoordinated densification experienced in Nairobi is set to continue for the foreseeable future. The growth in urban population, mostly of the poor, is not in tandem with economic performance, meaning that the urban majority will continue to be preoccupied with the struggle of meeting basic needs and will not be concerned with sustainability issues in the urban environment. Further, weak urban governance, ineffective planning policies, and underfunding of infrastructure development, especially in poor neighborhoods, is leading to environmental degradation, impeding any efforts toward sustainable densification.

The Nairobi situation is in line with forecasts on urbanization trends and population growth in African cities. It indicates that the densification of urban settlements will keep rising in the coming decades, and the focus of policy should turn to how this will be managed in order to guarantee planned intensification of neighborhoods. It has been observed that the benefits of urban densification are a central attribute of sustainable urban development, and as such, should be pursued through sustainable urban development mechanisms. This will include greater investment in environmental infrastructure and services, effective and inclusive urban planning and management, promoting economic development through industrialization and commerce, effectively managing the private sector's influence, and lastly, encouraging greater participation of the public in urban planning and development matters. Attention to these matters will be key in creating orderly, livable cities in Kenya and in Africa in general.

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Afterword: Miquel Adrià

Informality is nothing new. Rather, it is what has shaped cities for centuries and represents more the norm than the exception. Planned cities are few, with cases such as the grid of Miletus, the Roman *cardos* and *decumanos*, Palmanova by Scamozzi, Beijing's Forbidden City, Le Corbusier's *ville radieuse* or the Broadacre City of Wright, Brasilia, the *villes nouvelles*, and the newtowns as the exceptions. To a large extent, the construction of cities has been a combination of efforts to plan and project a layout and improvised expansions as a result of population pressure and rapid growth: from the *fuori muri* sprawls of medieval cities to the slums, the *polos*, *colonias*, kampungs, and favelas of the global peripheries. The novelty in recent decades is the size and speed of the phenomenon, directly proportional to the population growth of humanity and the increasing urbanization of the planet.

As several of the texts and research collected in this book mention, most informal urban settlements in the Global South suffer from disproportionately poor environmental conditions. The challenge for underserved/marginalized/outcast communities is dealing with water supply, sanitation, stormwater runoff, flood prevention, garbage collection, green spaces, urban agriculture, and air quality. Informal neighborhoods built on urban peripheries are the result of emergency processes produced by new actors that appeared beyond the formal and predefined urban structure. Construction is the primary and immediate act of residents of informal settlements. Informal urbanism is the object of this book, which brings together spatial tactics used by members of emerging societies who appear as new urban actors. Their actions have an impact not only on the morphology of these settlements but also on practices that are developed in these territories such as informal trade, informal transport, the supply of informal energy, and drinking water.

In turn, informal cities that are closely linked to formal cities establish dependency links that include overlaps, synergies, intersections, and contradictions. The *tabula rasa*, so desired by modern urbanism of the last century, is not only impossible but would be suicide. The interdependence between formal and informal cities is such that mutilation of such depth cannot even be imagined. In fact, the objective is for the

informal economy to become capable of reverting spontaneous settlements to legality. It is as important to have creative initiatives from the community itself as it is to have the support and collaboration of formal and legal authorities. However, solutions to alleviate the dramatic insufficiencies of informal settlements hardly come from formal governments—of countries or cities—where they occur but rather emerge from the base of society itself, from the initiatives that arise from need and urgency. Cases across the planet are countless, especially in the Global South. The rapid growth of settlements in South Africa, Egypt, India, Indonesia, Argentina, Mexico, and Guatemala, due to internal migrations from the countryside to the urban peripheries, as well as the temporary refugee camps in European countries or the colonies of undocumented Latin Americans in US suburbs, proves that we are facing a global phenomenon.

Cities such as Nairobi or Cairo, which have grown exponentially in recent decades, have expanded uncontrollably through sprawl that occurs beyond formal development, eventually occupying desert lands that are owned by the government and inhabited by migrants who, in most instances, come from the same place of origin. In all these cases, tactical interventions of appropriation, design, and management of effective and sustainable urban spaces are necessary. Informality starts from self-construction and the absence of the public to progressively define the processes of growth and creation of common areas. Because of this, it is important to learn about the virtues of progressive construction, as well as to define adequate urban densification to achieve safe and livable cities that contribute to community resilience.

Public space is a meeting place for every community. If informality is omnipresent in all physical and social structures in the growth of the city—in its infrastructures, services, and most importantly, its social, political, and economic interactions—the creation of meeting spaces will be what crystallizes urban communities. With the current situation of the COVID-19 pandemic, in addition to the stationary floods and droughts in so many cities of the Global South, the fatigue of metropolitan infrastructures constantly shows fractures and threatens potential collapse. It challenges sustained insecurity of cities and their conurbations and deserves a broad and inclusive citizen dialogue to define priorities that privilege the interests and needs of people and the services that they expect from a city. The city is formal and informal, a hybrid that cannot be ghettoized. The inhabitants of one and the other must achieve their citizenship status. The definition of common space, its uses, and its temporal appropriations continues to be the territory of battles between citizens (as we see everyday) but also places for agreement. Urban planners and politicians, social agents, residents, and squatters should start from an agenda that emerges from consensus, reacting to subjects such as inequality and gentrification, but also density and infrastructure, to define a future course.

In this sense, some experiences that have been carried out on the edge of informality, quasi-legal, have been highly successful. On the one hand, the street vendors in so many Latin American streets are not only part of everyday urban culture, but they are also the food supply network for citizens both formal and informal. On the other hand, unfortunately, disasters due to natural causes such as floods, earthquakes, hurricanes, and fires are triggers. These impacts demonstrate the existence

of social organizations capable of reacting quickly and effectively, despite lacking access to political representation or urban planning. Eventually, from these events and the eruption of social organizations, success stories have catalyzed the establishment of negotiation processes. Such is the case of street vendors in Guatemala, who managed to be part of a negotiation process and reached a peaceful agreement with the municipal government to achieve formal relocation. Together, they contributed to creating a better city.

As in this case, avoiding the limitations of formal zoning and transforming parts of self-built houses into small businesses (by moving the living areas to an upper floor built in phases) is another example of resilience and permanent hybridization. No less surprising are the achievements in Egypt based on ancestral practices that go beyond the dichotomy of formal and informal. The practices of collective gathering, mourning rituals, and carnival celebrations break all barriers of class, gender, and race.

Informal settlements and housing are two sides of the same reality. Housing is a human right. If public spaces make up urban voids, collective housing is what builds the fabric with which the framework of the city is filled. Housing is the magma of our cities. There is consensus that a dense and compact city is more efficient than a dispersed city. Mainly, cities increase in size through two mechanisms: they densify or expand; they grow vertically or horizontally. Densifying means adding construction area within the existing city limits, while expansion means adding new areas outside of these limits. Collective housing provides density, while informal settlements expand the territory. Large numbers of low-income people live in self-built, isolated homes, or government-funded isolated homes. Neither option solves the problem; indeed, they make it worse because of their fragility and lack of sustainability. Without technical knowledge of structures and facilities, self-built housing produces minimal or insufficient habitat for the majority of the population. In many cases, these have been informally appropriated, which does not give them property rights. While it is true that no other subject causes more controversy than housing, it is also important to remember that, as Henri Ciriani said, "good architecture is only architecture, but good collective housing makes cities."[1]

The overflowing growth of so many peripheries with self-construction, and the consequent lack of urban infrastructure and the danger caused by unsuitable land (ravines, garbage dumps, etc.), as well as structural insecurity, should not be the solution to a large-scale global problem. While it is true that there are worthy isolated examples, it should not be forgotten that they are irrelevant to the massive demand for collective housing in most developing countries. A process of urbanization based on camps and informal settlements only perpetuates the exclusion of the benefits and opportunities that cities provide. The right to land is essential to reverse exclusion. "The city—as Alejandro Aravena points out—is practically a public health mechanism, a vehicle for survival."[2] Cities are basically a concentration of opportunities: work, education, health, mobility, and even recreation.

Neither are public policies that have fostered two complementary strategies to address the scarcity of good solutions: move away or shrink. The incompetence of institutions and governments when faced with carrying out a major project that

requires urban infrastructures—streets, lighting, drainage, etc.—led to the emergence of fundamentally local proposals where the activist architect's knowledge influences the construction process of rural communities. Self-construction directed by socially and politically committed architects, with limited resources, both locally and economically, has been repeatedly proposed as an alternative to the chaotic dispersion of single-family concrete blocks. The confetti effect of a systematic action can radically change a neighborhood with properly directed individual actions.

Throughout the last decades, many exemplary cases have proposed alternatives based on the architect's collective participation and technical support. These proposals have shown that it is possible to build quality domestic spaces where users can identify with their culture and not submit to living in nondescript boxes. With the necessary instruction, as proposed by Carlos González Lobo in Mexico, communities can self-produce their habitats, allowing them to innovate both formally and structurally. To do this, he developed various strategies that attempted to understand the logic of self-construction to integrate it into production processes. In turn, González Lobo included construction processes appropriate to the local culture and tradition. His projects incorporate the self-construction methods of users and an understanding of local realities. Also, recent experiences in Cape Town, published here, demonstrate how the collaborative making of buildings in informal settlements and architectural practice can be rebuilt through community engagement. Indeed, architects who have had experience in multidisciplinary projects can straddle the formal and the informal, "engaging in an impure and hybrid mode of architectural practice that is grounded in its context."[3]

The proposals that respond to open systems versus closed compositions are relevant, eventually, as Mark Wigley points out, "with a prosthetic vocation". Examples developed in the kampungs of Indonesia show how informal settlements can be transformed from "small-scale spatial and physical processes including incremental adaptations that divide and extend existing rooms, add a floor and new rooms, attaching verandas and inserting internal or external stairs to gain upper-level access."[4] From this micromorphological approach, with an understanding of small-scale free form and a mix of vertical or horizontal adaptations, the incremental effect of self-built houses in irregular settlements improves quality of life over time.

Architects can actively participate in such design processes. While it is true that architects have missed critical opportunities to be special agents in the transformative processes of upgrading informal settlements, and the profession is paradoxically confined within legal boundaries, the goal of architects should be collaboration with community agents. The technical, legal, and creative knowledge of our profession should be made useful in creating better cities.

As Hashim Sarkis mentioned, "unlike a political statement or a legal manifestation of a social contract, a spatial contract is open. It's open to multiplicities and simultaneities in a way that a kind of linear interpretation of the law is not."[5] These pages mention that "the Global South marked by growing informal settlements, inequalities and socio-spatial fragmentation, added to climate change, knowledge is needed to direct their transformation path toward more sustainable futures."[6] Beyond best practices, architects must leave their disciplinary self-absorption and migrate toward a

more collaborative, transdisciplinary, and multidirectional working method. In many cases, the absence of quality public spaces and the deficient supply of social housing is due to the lack of coordination between public policies, developers, communities, social agents, and citizens. The architect has the conditions, attributes, and knowledge to unite all interests, lowering the level of uncertainty and building better cities from collective housing. Promoting responsible public policies and participating in citizen mobilization will accelerate the process of building fairer cities with quality architecture and public spaces. The architect's social function consists of giving coherence to a set of diffuse social demands, providing visibility to the actions of transformation. Sarkis said that "we [architects] have a strength in us to synthesize, to connect, to enable because we think *projectively*. We think with the project."[7]

With the crisis triggered by COVID-19, the differences between formal and informal cities have been exacerbated. The collective awareness of creating meeting spaces for communities building citizenship has become an even more urgent need. Public space needs to be reinvented, legitimizing the spatial appropriations of the community. The role of the activist architect can be to coordinate and give physical and legal shape to the explosion of outdoor dining and the occupation of streets and parking lots, designing the permanence of temporary and spontaneous acts. The tactical urbanism movement is the way to build a city from—and with—informality. In turn, micro-informalities can also be designed. Incrementality is not leaving a building unfinished and expecting each individual to complete it. Incrementality must be calculated. Not necessarily one at a time, but by generating a stock of ideas and proposals that could be replicated on a large scale.

Collective housing becomes a central issue and requires solutions to convert "bedroom communities" into multipurpose spaces to live and work. The expansion of living spaces outdoors with revalued balconies, terraces, and green roofs, non-specialized and potentially multipurpose environments, and common areas are some of the solutions demanded by communities in many cities. The effect of the pandemic has stimulated reflection on habitable space where it is possible to reformulate the concepts of the own, the common, the collective, and the public. By increasing the participation of activist architects with a social vocation, we can help improve the conditions of self-built or collective housing, while improving the conditions of public spaces to creatively transform informal settlements into cities for all.

Endnotes

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