

Field Report

Work, Slums, and Informal Settlement Traditions: Architecture of the Favela Do Telegrafo

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This report proposes patterns, guidelines and principles for use in the design of social housing, derived from the existing “self-help” context of slums in Brazil. It is based on findings from seven years of ethnographic field observation in the Favela Grota de Santo Antonio (2008–2015). The research revealed that the presence of work activities (which generally happen within residences) has greatly modified architectural space within the *favela*. From a post-neoliberal point of view, the report also offers a global critique of the planning of social housing with regard to issues of labor.

This report seeks to offer a new interpretation of informal settlements and the design of social housing based on an analysis of the labor practices of the residents of Brazilian *favelas* observed extensively in the field over the course of seven years. Following the framework developed in past IASTE publications, these practices will be considered *open-ended* traditions, which may serve as a “foil for exploring the contested subjectivities involved in producing and/or occupying space.”¹

The report is based on a case study in the city of Maceió (in Alagoas state, Brazil), but as will be demonstrated, its conclusions may be extended to informal settlements around the world. In fact, the report aims to address a range of assumptions and paradoxes surrounding current theories related to informal settlements. It also reflects on the way the architecture and planning of such settlements are being taught and conceived. In this regard, its primary intent is to link an analysis of systems of labor to the design of the informal city, a connection that planning and design literature has yet to adequately explore.

The field-observation phase of the research started in 2009, with the aim of exploring the dynamics of life and the daily practices of inhabitants in some of the poorest slums in Brazil. These included the Favela Sururu de Capote (FSC) and the Grota do Telegrafo (GDT), also known as Favela Grota de Santo Antonio, both located in Maceió, the

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capital city of Alagoas state. Of the two sites, this report will mainly focus on the Grota do Telegrafo.

The first residents of these two *favelas* migrated to the city from surrounding rural areas, where many had worked as sugar-cane cutters. This migration continues today and is fueled by various motivations. Some interviewees said they decided to move to the city after becoming unemployed; others said they had run away out of misery; and a few claimed to have accepted new jobs in advance of moving, or to have simply decided to explore a different place. However, in all cases residents reported they had come to the city looking for better work opportunities and services.

Within Alagoas, Maceió is commonly regarded as the “big city.” To reach it, migrants generally travel by *pau-de-arara* (irregular transportation on the back of a truck). Sitting uncomfortably, side by side, under a canvas cover that supposedly protects them from the harsh tropical sun, the journey may last for days. At its end, migrants hope to find a city of opportunities; however, their dreams are often dashed. On arrival, they immediately find that renting living space in formal areas is too expensive, even if they use all their savings. Needless to say, they cannot afford to buy a house or a plot of land. Housing is also not their only financial challenge. The cost of food, transportation, and other services involved in living in the city are typically far beyond what they can afford. Left with few settlement options, many seek space in an existing *favela*, where they are likely to encounter relatives and friends. Overall, the slum thus becomes their passageway to the city.

In terms of employment, a number of interviewees revealed that many *favela* residents do not even work in the formal city, but within the borders of the slum itself. Their activities may include fishing, crafting, running a business, trading, collecting garbage, recycling, farming, hawking, or offering services such as sewing, hairdressing, or nursing. *Favela* inhabitants who find jobs in the formal city, by contrast, may work as maids, carters, babysitters, masons, hawkers, drivers, cleaners, secretaries, or clerks in supermarkets and shopping malls.

Previous scholarship on informal settlements, such as that of Abhijit Banerjee and Esther Duflo and Benjamin Marx, Thomas Stoker and Tevneet Suri, has typically considered the particular labor activities of residents to be secondary to the larger economic forces driving the creation of slum economies.² Likewise, work activities have rarely been accounted for by architects and planners in design and planning proposals related to such places.

Based on field observation, this report argues, to the contrary, that labor must be part of the planning rationale for slums. In Brazil, these practices can represent a valuable tool in the design of space and buildings within *favelas*. Analysis of work activities may also offer lessons for formal housing strategies and help fill a general gap in literature related to informal settlements.

CASE STUDY OF THE GROTA DO TELEGRAFO

The Grota do Telegrafo (GDT), also known as Grota de Santo Antonio (GSA), is located in the Mangabeiras neighborhood, in proximity to several strategic sites. The *favela* offers a view of the sea of Mangabeiras, and is located five minutes from the oldest shopping mall in the city. Some inhabitants of the *favela* work in this mall — for example, in boutiques. Others sell food prepared inside the *favela* around the city, such as in the historical center of Jaraguá or at Maceió’s numerous beaches (Ponta Verde, Jaraguá, Jatiúca, Cruz das Almas).

There is also a large public market adjacent to the *favela*, the Mercado do Jacintinho. The market takes place from Monday to Sunday, regardless of public holidays, and many *favela* residents work there or go there to make purchases. The market offers many products, such as *pasteis* (a Brazilian salty pastry made of fried batter filled with cheese, ham, or minced meat), *caldo de cana* (fresh sugar cane juice), coconut water, pastries, cleaning products, herbs, clothes, fruits, vegetables, meat, and fish. Numerous related businesses are also situated around the market: a Samba school, bars, restaurants, post offices, candy shops, cake shops, supermarkets, construction companies, *brechós* (thrift shops), jewelry stores, and other outlets of formal commerce. Some of the *favela* inhabitants work in these enterprises as well. Most businesses in and around the market accept credit cards, and vendors are familiar with the latest trends emerging from big commercial centers.

Many *favela* residents are *carroceiros* (carters), or waste collectors. However, the population is varied, and many inhabitants attend schools, universities, or technical institutes across the city. There are numerous schools around the *favela*, some of which are private but ask very low fees. There is also a health center for the community. Overall, the economic profile of inhabitants varies significantly. A person may be a squatter, a tenant, or a semi-squatter; squatting may even be considered a business venture.

In addition to outside sources of income, numerous economic activities occur within the *favela*. Some houses double as stores, selling cakes or ice cream; and the front parts of others may provide space for restaurants, tattoo studios, prayer halls, carpentry or car-repair shops, nurseries, Internet cafes, and other activities. Small, private *quintais* (back-yard areas) are also commonly used to raise animals and grow fruit. Some of the products made in the *favela* are exported to other cities within Brazil. Inversely, some of the products sold by inhabitants are imported from other countries, especially from China (FIG. 1).

In the *favela*, both domestic and labor space must be structured according to the needs of residents. Much of this construction is overseen by masons who work in the formal sector in addition to living and working in the *favela*. Other *favela* inhabitants also move between the formal and informal economies. Indeed, having a foot on either side of the fence allows people to apply knowledge acquired in the formal city to the in-



FIGURE 1. The main countries affected by the work of the inhabitants of the Favela do Telegrafo.

formal city, and vice-versa. Design features of houses and stores clearly demonstrate this reciprocal influence, especially through the application of techniques and styles of construction.

Inhabitants take great care of their homes by maintaining gardens, tools and furniture. Working at home can also be a lonely activity; therefore, some residents share space, tools and devices with neighbors. This may especially be the case when people share dwelling areas. For example, juice vendors may share water tanks and blenders with neighbors in a *villa*. People may also work together in courtyards or alleys within the shared multifamily space. In other cases, families may own and run entire businesses in their homes, modifying space to accommodate the activity, but also preserving their domestic life.

In the *favela*, houses along alleys, stairways, and main roads are most frequently modified for work purposes. Along alleys, houses are often transformed to include window shops, while the most typical activities along main roads are those that serve multiple people at once, such as bars, restaurants, and stores selling *sanduique passaporte* (a sandwich with sausages, minced meat, green peas, and mayonnaise typical of Maceió). In many cases, regulars visit these places from other parts of the city. Evangelical churches are another activity emerging within the landscape of the *favela*, and their prayer services may employ loudspeaker systems, especially at night.

In addition to their houses and shops, *favela* residents must maintain sewage and water systems to ensure that such services are available to all. Often water pipes are left exposed and unglued to permit house extensions or facilitate water extraction in case of emergencies. This flexibility also allows for the filling of swimming pools — although a group

of experienced masons would typically be asked to evaluate such a project. Masons do not only build houses, but they also maintain the common structures of the *favela*.

In the pedestrian realm, on hillsides, some stairways are finished, while others may still be made of earth. Inhabitants try to perform upgrades in *mutirões* — a term used to describe how community members work together, sharing skills. Masons, in particular, take great pride in their work — especially its structural-engineering aspects. Many Brazilians are surprised that *favela* neighborhoods are able to survive the frequent tropical rains — especially since many are built on steep slopes. Once again, this owes much to experienced masons who share knowledge to profit their communities, and vice-versa.

Over seven years of ethnographic observation, the growth of several types of business managed and frequented by *favela* residents was particularly notable. Among these were grocery shops, childcare facilities, tattoo studios, carpentry workshops, machine repair and maintenance shops, bars, restaurants, ice cream shops, Internet cafes, prayer halls, dressmakers, and hairdressers. The design of space for such enterprises typically allows the preservation of domestic life, despite being located inside the home.

Indeed, it was observed over and over how *favela* spaces are designed to meet both domestic and work functions (FIG. 2). A good example are the windows at the front of houses that create spaces where products may be exposed and sold — what I have referred to as “window shops.”³ Clients of these shops often come from the neighborhood, and they pay for and receive items, typically groceries, through the window. Some of these windows are designed with steel

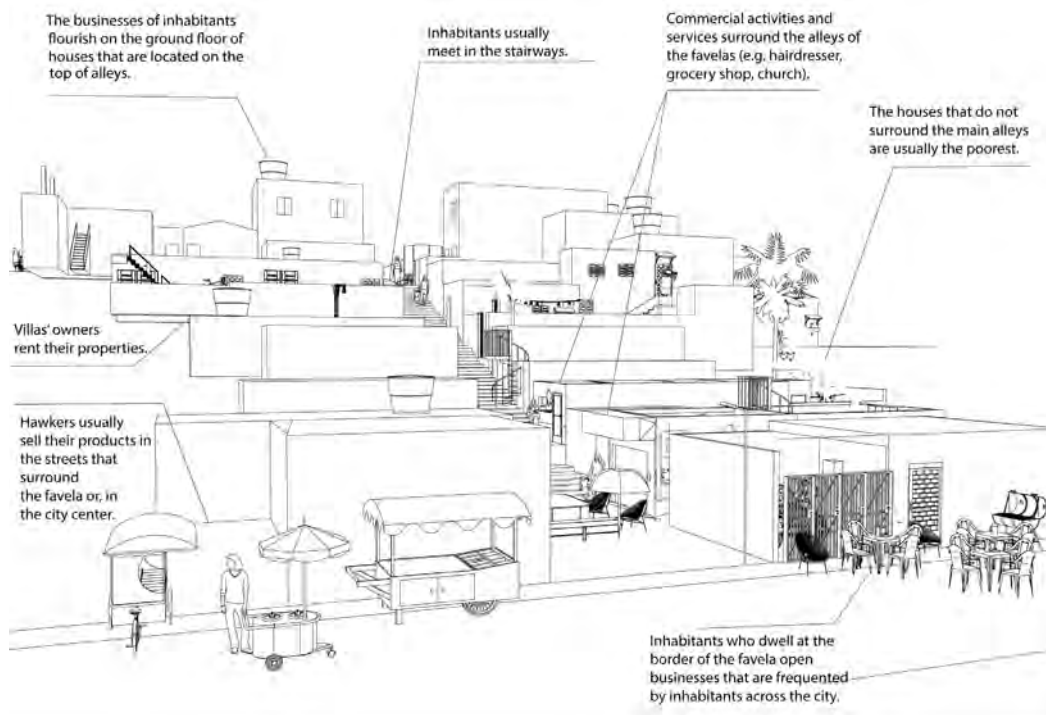


FIGURE 2. The strategic locations of work activities in the Grota do Telegrafo.

bars to protect against robbery or shield the owner in case of a dispute. To preserve the privacy of inhabitants, such shops may not have front doors. Meanwhile, on the interior, they frequently occupy improvised space at the front of the house. By contrast, commercial spaces located on avenues in proximity to the formal city are usually fully open to the public. They may be used for such purposes as snack bars, bike repair, car repair, clothing repair, hairdressing, Internet cafes, and bars. However, in the case of activities where tools may be expensive or where the activity itself is noisy (for example, carpentry workshops), work space may move to the back yard, generally to a self-built atelier/house extension.

In addition to more typical commercial activities, some *favela* residents invent work opportunities (e.g., as windshield wipers, street-food sellers, or operators of sound systems for advertising). On a typical day, however, workers of all types can be seen at around five or six o'clock in the morning going up or down the *favela* stairways, stoically greeting their neighbors amidst the strong smell of *cuscus*.⁴ They may also be seen at nearby bus stops, which are especially crowded in the morning. Such an image provides a contrast to the epicurean depiction of Carnival and other celebrations in *favelas*. Of course, many such festivities and social happenings do take place. And they frequently take advantage of the practicalities of mobile and temporary structures, as well as handcrafted adornments. For example, the back a pickup truck may double as a stage for evangelical gospel singers.

In addition to such informal activities, many inhabitants work in the formal sector as shopping mall employees, boutique clerks, market-stall vendors, resellers, construction workers, taxi drivers, or maids. Others may be employed by the state or have their own business ventures (e.g., as masons). Many others generate income by renting properties in the *favela*. Rent is relatively expensive, and the longest-tenured inhabitants tend to have built and own more than one house.

LABOR AS A NEW PERSPECTIVE WITHIN THE THEORY OF INFORMAL SETTLEMENTS

The patterns revealed by the case study provide a new perspective for the assessment of informal settlements. Specifically, the case study sought to understand the phenomena of labor as it relates to affordable housing and the particular work activities *favela* residents engage in. Beyond these concerns, it also attempted to generate useful planning insights that might contribute to a better model for social housing in Brazil and elsewhere.

As Saskia Sassen has pointed out, most work opportunities are nowadays located in urban areas.⁵ In this regard, Neil Brenner and Daniel Ibanez have also argued that the city should be viewed as an asset to post-neoliberal society.⁶ Both networks of services and labor are today situated in the central portions of urban areas. However, the significant mass

migration of rural inhabitants to cities has created a number of economic dilemmas. For example, according to studies by Brenner, the current urban age has led to a redefinition of the region, in which individual cities, as centers of economic and social power, may be more relevant than states or nations.⁷

Globally, cities are likewise anchors of hope and opportunity. Yet, as described in the case of the Grota do Telegrafo, when rural migrants arrive, they face a harsh new economic reality. People who live in a rural settings earn around ten times less than those who live in urban areas; yet when they move to the city they also expected to pay far more for goods and services. The inhabitants of cities frequently also do not have the same opportunities for generating income within their dwelling space as their rural counterparts. This situation has been noted since the 1950s, when the housing expert Charles Abrams wrote about it with regard to countries where his chief mission was to develop projects for U.N.-Habitat.⁸

Upon arrival, rural migrants typically cannot afford most forms of urban dwelling with the savings they have accumulated. Nevertheless, thousands of such migrants continue to arrive in big cities on a daily basis.⁹ For many of them, informal settlements may be their only option because housing prices are lower there than in other places within the city and the cost of food, services, and other products is also typically lower. Indeed, slums may be a city's only housing solution for the poor.¹⁰ There is thus a need for strategies that will do a better job of sheltering migrants and providing ways for them to earn an income. However, such strategies must also take into account the limited saving and spending power of the unprivileged. For them, living in formal dwellings is not a possibility. In some sense, then, one can say that not everyone has access to the "right to dwell."

A further paradox is that although they may provide an entry door to the city, slums may no longer be considered a transitional stage in the lives of individual migrants; instead, they seem to persist as locations of fixed residence. One reason, as demonstrated by the present research, is that many residents find work within their confines. Some authors, such as Marx, Stoker and Suri, have referred to this condition as a poverty trap.¹¹ However, it may be more useful to address concern for income limitations within the existing context. The fact is that many migrants find both shelter and work opportunities within the flourishing economy of the *favela*. Indeed, as a study by the London School of Economics and the Alfred Herrhausen Society found, the economy of slums today composes a great part of the GDP of the world.¹²

In his seminal book *Housing by People*, John Turner famously acknowledged the role of informal settlements as the entry door for migrants to the city.¹³ According to his reasoning, they could be seen as a temporary solution to the problem of urban housing; at a later stage, people would access formal housing through the accumulation of capital from their work. Many formal housing policies have likewise assumed that slums serve as a useful transitional space in

the life of the poor. However, nowadays slums may better be interpreted as a permanent dwelling environment.

Furthermore, while cities may be great engines of labor and services, they may face structural limitations when it comes to housing. Thus, as Nabil Bonduky has pointed out, the more labor opportunity a city offers, the less housing it is typically able to provide.¹⁴

In this context, the neoliberalization of housing provision has been shown to have had explicit effects in cities across the globe. During the first phase of neoliberalism, for example, the growth of cities created great numbers of new jobs. But, as Sassen has pointed out, neoliberalism's second phase has brought a sharp decrease in the number of new work opportunities.¹⁵ She further noted that skilled and low-skilled workers may increasingly now be distinguished by their areas of residence. The urban center is a dense setting, full of working opportunities, where low-skilled labor is as necessary as high-skilled labor. Nevertheless, while skilled workers tend to live in city centers (near their work), most low-skilled workers live in the peripheries (far from their work).¹⁶ One consequence is a daily, long-distance commute to work. Thus, although some migrants may be forced to live in peripheries because they do not yet have access to formal employment, a migrant employed in the lowest tier of the formal economy will typically also face difficulties finding housing in proximity to the workplace.

Informal settlements may thus be seen as an indisputable fact of planetary urbanization. Driven by the disparity of economic opportunity between rural areas and cities, their emergence and expansion may be explained through a model of flows of people, goods and information, established by neoliberal economic systems. Their growth today facilitates the development of both the real economy and the financial economy. Manufacturing in the Southern Hemisphere thus enables the financing of retail fashion stores in the Northern Hemisphere.

In the case study, it was discovered, for example, that some hawkers who live in the slum sell Chinese products in the streets, while some locally produced products (such as raw materials) are exported to other cities in Brazil and possibly to other countries. In the same way, slum dwellers in India, South America, and Africa sell their work hours into a global market in which both their services and the goods they produce are cheap. For example, fabric and clothes produced in Indian slums supply retail outlets in Europe, and Chinese farmers living in barracks supply food to countries of the global North. However, such workers also inevitably create new centralities in their cities and settlements. Together, these forces enable a new cartography by which labor value may be understood in relation to the growth and emergence of informal settlements around the globe.

In all environments, work activities create spaces, shape buildings, and influence the decisions of their inhabitants. However, the labor features of Brazilian *favelas*, and slum settlements in general around the world, are not well docu-

mented. Usually, academic research fails to go beyond the subsistence quality of the work. Attention is thus directed mainly to the consequences that poor living conditions produce in slum environments and the fact these are inherent to the lives of their inhabitants. For example, in *Housing by People*, Turner depicted what he described as the everyday life and struggle of a car painter in a slum in Mexico, without ever describing the effects of his work on the space he inhabited.¹⁷ A similar observation could be made with respect to the brief descriptions by Abrams of residents of the slums where he built housing projects for the U.N. in the 1950s.¹⁸

LABOR AS A NEW PERSPECTIVE ON THE DESIGN OF INFORMAL SETTLEMENTS

Besides observing conditions in the *favela* as a way to advance general debate on informal settlements, the research set out to investigate ways that architects could operatively rethink informal settlement design. The goal here was to move toward a housing system that builds on the existing context of informal dwellings. Lessons from the informal city and the mass migration of rural people might thus also be recognized as the basis for new housing proposals.

The first consideration in any such effort is the application of “self-help” within the planning and design of informal settlements. As recognized by Abrams, self-help is a “universal tool,” considered in the housing policies of almost every developing country.¹⁹ Sometimes it is useful as a way to minimize construction cost, while at others it acknowledges the incremental nature of construction within unprivileged settlements. Self-help may also reflect the economic limitations of government entities, especially in the global South. Frequently, however, the gap between shelter and income requires input from both the planning and economic domains. In this regard, programs such as “affordable rent,” “self-help planning,” “core construction,” “incremental housing,” “sites and services,” “installment construction,” and “open design” are characteristic of societies where resources are limited.²⁰ In applying such programs, however, attention to the social practices and traditions of inhabitants may be as important as institutional concerns.

A second consideration essential to a new design understanding is that institutions, states, and housing programs typically turn a blind eye to both the growth and emergence of slums. In Brazil, the designation of *favelas* as ghettos is emblematic of this view. Yet, despite this stigma, *favela* inhabitants commonly interact with people from the so-called “formal city,” who frequently benefit from both goods and services provided by *favela* residents. And beyond this, the inexpensive work of slum inhabitants is often present in international manufacturing via subcontracting.

Typically, however, “formal city” inhabitants venture into *favelas* only for such specific purposes as finding a cheap

source of car repair, dress making, carpentry, locksmithing, prepared food, etc. And this in turn reinforces an underlying basis of inequality within the Brazilian economy, according to which cultural habits and individual empowerment must also be negotiated.

Another point to consider is that, as a result of general urban expansion over the years, many older *favelas* are now located in relative proximity to city centers. Within existing informal settlements, this has created problems associated with gentrification. Gentrification and real estate speculation are typical features of housing markets. The current view in Brazil, however, is that the unemployed are the only ones seeking affordable housing within informal settlements.²¹ In fact, numerous other, socially diverse groups are moving there. “Gringos,” “hipsters,” the creative class, and the middle class are all searching for alternative modes of dwelling. But these groups both perceive and consume the *favela* in different ways than older residents. And some are thus contributing to the displacement of older population groups to more distant peripheries.

The proximity of older *favelas* to central city areas, however, also suggests that *favelas* that can still be classified as ghettos are in fact places where equality of economic opportunity has been purposefully suppressed. According to the Brazilian economist and philosopher Eduardo Gianetti da Fonseca, such prejudice derives from overarching conditions of social inequality. A ghetto in Brazil is not comparable to a ghetto in the U.S., he claimed, because in the Northern Hemisphere there has been an attempt to “assassinate” both the habits and cultures of ghetto residents.²² By contrast, the housing of low-income groups in Brazil in *favelas* is the accepted outcome of deliberate economic exclusion. Brazil is a syncretic and mixed culture, which adopted habits from different groups, including unprivileged African slaves and Amerindians. Thus, patterns of development and segregation may be seen to express deeply rooted patterns of inequality.

In Brazil, in other words, it is indisputable that the poorest of the poor will build new peripheries. In this sense, the slums are an on-going project. Nevertheless, paying attention to how the labor of the unprivileged expresses an ongoing struggle against unequal social and economic interaction might reveal new ways to address underlying problems. In particular, issues of inequality and class difference could be mitigated by a recognition of the dynamics of labor in the *favela*.

Beyond the setting of the *favela*, a third consideration that must be taken into account in any new design approach is that formal initiatives to relocate *favela* residents generally result in dwellings that do little to advance their economic prospects. Current social housing efforts neither encourage a mixing of the unprivileged with other social groups; nor do they facilitate the ability of the poor to engage in ancillary economic activities. The advantages offered by new structures must ultimately be evaluated in terms of their ability to accommodate ongoing social practices as well as allow opportunities for income generation within the dwelling environment (FIG. 3).

The above condition is a massive deficiency within projects undertaken as part of the federal government's Minha Casa Minha Vida program, the biggest ongoing low-income housing initiative in Brazil (which has set out to provide five million new dwelling units by 2025).²³ Projects funded by the initiative are generally located on the peripheries of cities, where the price of land is lower, and their standardized design could be found anywhere of the world.²⁴ Such forms of housing do not account for the inconvenience of long-distance travel by inhabitants to the center of cities for work (or its cost). Nor do their qualitative aspects provide adequate dwelling space reflective of residents' needs.

This condition points to one of the most important aspects of a new design understanding: the importance of urban porosity.²⁵ As mentioned, labor activities within a slum may attract people of different statuses and classes in search of cheap products and services, creating a meeting of the formal and informal cities. Previous studies have shed light on the role of porous, affordable housing or socially mixed developments in mitigating characteristics of inequality in cities worldwide.²⁶ But there has been little discussion of the merits of porosity, or social mixing, in projects being considered for the third phase of the Minha Casa Minha Vida program. Indeed, projects in which different economic classes live together in multifamily structures do not seem to have a place in Brazilian housing models. Public planning

policies could, however, seize on this strategy as a way to fight social inequality. Porous and mixed units could be a big help in addressing current prejudices against the poor.

Beyond such concern, however, at a minimum, the design of social housing for the unprivileged must include spaces in which work can take place. The dwelling environments of low-income groups have traditionally allowed a blending of work and domestic activities. Indeed, such a feature is increasingly prevalent in dwellings occupied by the Brazilian middle class. According to the sociologist Jesse de Souza, middle-class families must typically be supported by two or more sources of income if they are to maintain a desired quality of life for all their members.²⁷ Such a condition underscores how the Brazilian economy today is largely being driven by commercial activities — the so-called third sector — as is the case for many other countries in the global South.

Lastly, it must be recognized that spaces in the *favela* are performative and adaptable. But spatial attributes that might enable such practices as the sharing of tools, devices, and work areas are rarely considered within conventional approaches to design. The importance of such practices, however, is reflected in the fact that the poor frequently prefer to invest microcredit funds in income generation than in dwelling amenities.²⁸ Work activities may thus be seen to have both material and immaterial dimensions which are being ignored in current planning and design approaches.

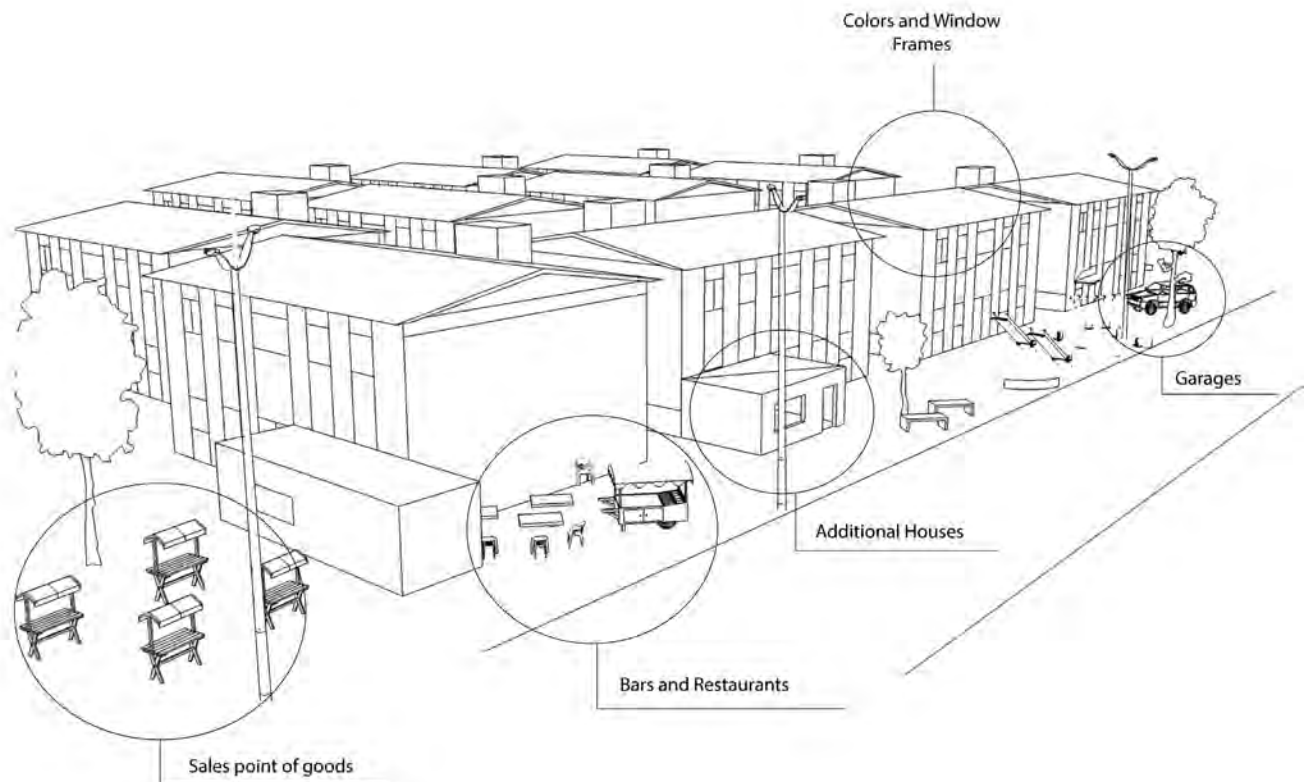


FIGURE 3. Modifications in the mass housing project for relocated residents of the Favela Sururu de Capote.

PATTERNS AND PRINCIPLES FOR MORE RESPONSIVE DESIGN

The work practices observed in the space of the Favela Grota do Telegrafo can be defined as traditions. Through them, inhabitants transform and adapt spaces in ways that allow them to engage in countless forms of economic activity. Michel de Certeau described such social practices as “*tactiques*.”²⁹ Likewise, Nezar AlSayyad has argued that, as traditions, they “must not simply be interpreted as the static legacy of the past but rather as a model for the dynamic reinterpretation of the present.”³⁰ It is through such practices that people take care of their daily needs, and they could be legitimated by more formal planning processes.

Based on field observation, this report has explored some broader theoretical notions related to rural migration, the nature of the urban workplace, the centrality of cities, porosity, the growth of the slum economy, and the distribution of skilled and low-skilled labor in cities. It has also contested the notion that *favelas*, and urban slums in general, are temporary places. Instead, it has advocated the view that they be

considered fixed sites for the homes and work spaces of the rural poor who migrate to the city.

However, in addition to such intellectual concerns, the research also sought to identify a series of patterns that may be used as a pedagogic tool for learning the practices of informal settlements. Explained in graphic form, these might help create a better method of design derived from the actual context of informal settlements (FIGS. 4–13). Many of these spatial attributes derive from the ways that inhabitants incorporate work activities into their dwellings. After such practices were identified, attempts were made to quantify them as if they had been the outcome of a formal planning exercise. They thus reflect the belief that the traditions of the unprivileged represent a design resource that is as valuable as many of the conventional tools being applied in architecture and planning.

A series of principles and guidelines for the design of social housing in Brazil is also included here. The broader applicability of most of these is still being tested; however, it is hoped they may eventually be related and applied to other building contexts — even if social housing responses can never be universalized.



FIGURE 4. A window shop in the favela.



FIGURE 5. A hairdresser activity embedded in a favela house.

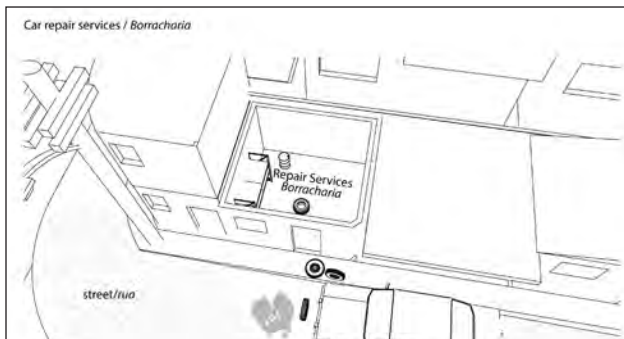


FIGURE 6. Car-repair services are usually located along streets at the border the favela and the formal city.

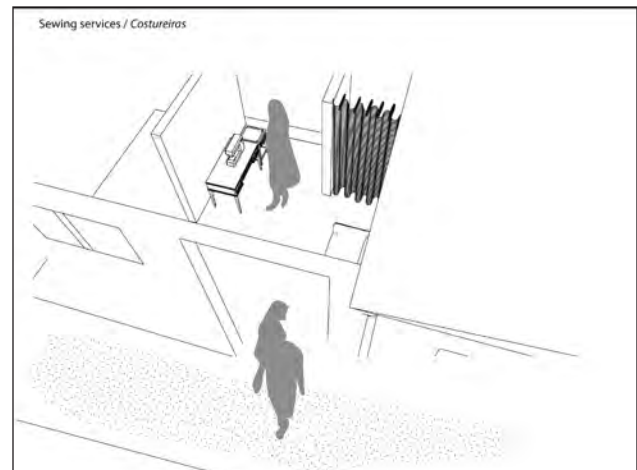


FIGURE 7. Clothes-repair services are usually located along streets at the border of favela and the formal city.



FIGURE 8. Artisan activities may be located in the back yard of houses in the favela.

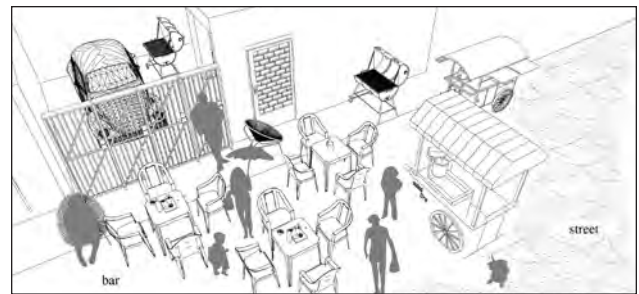


FIGURE 9. Restaurants are usually located along streets at the border of the favela and the formal city. Alternatively, they can be located at the ends of main alleys.

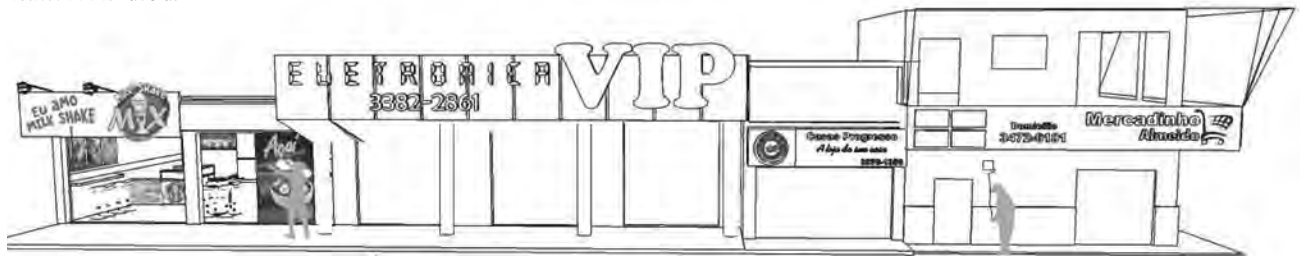


FIGURE 10. Letterboards and painted signs are usually placed on favela houses to indicate the economic activities of their residents.

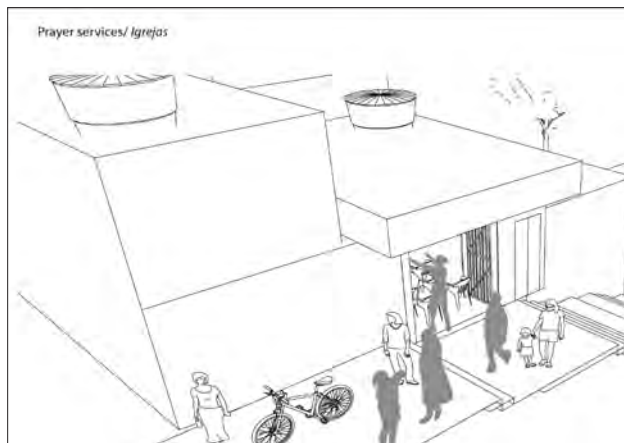


FIGURE 11. Churches are usually located along main alleys in the favela.

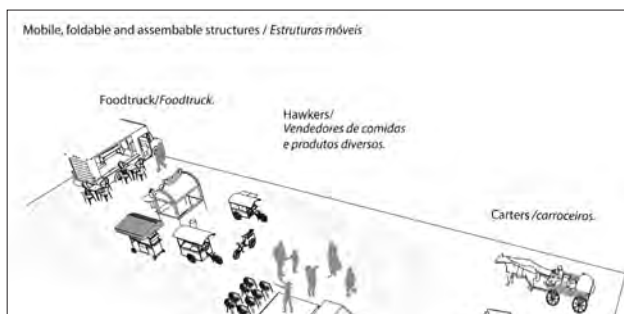


FIGURE 12. Performative activities are typical both for work and social gathering in the favela.

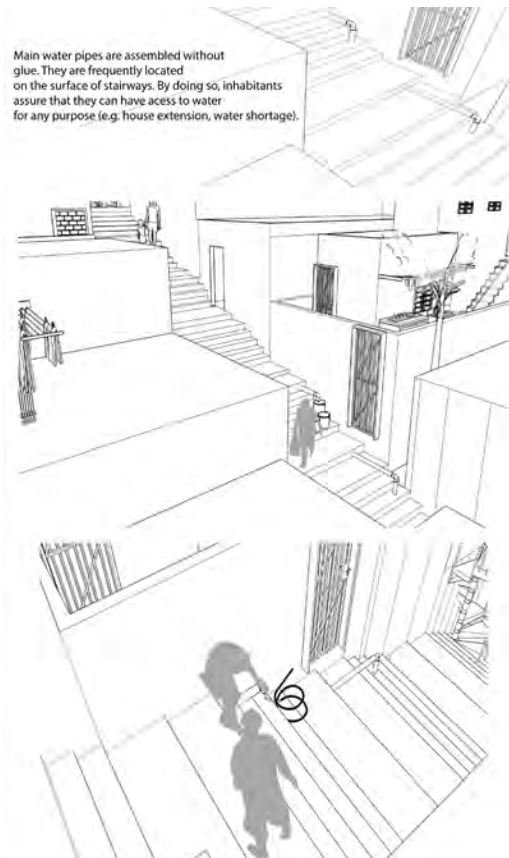


FIGURE 13. The location of water supplies in the favela emphasizes flexibility.

DESIGN PRINCIPLES AND GUIDELINES

- Addressing work activities is fundamental to designs that promote the incremental growth of *favela* dwellings.
- Housing initiatives in the context of informal settlements should consider that both domestic and work activities typically occur in the home.
- The front portion of *favela* houses located along main streets, alleys and avenues typically serves as a place of commerce. In such locations, the goods and services offered are usually more diverse and sophisticated than in internal areas of the *favela*. Such locations are profitable because they attract people from other neighborhoods.
- The windows of houses along alleys are typically used to sell goods (e.g., window shops).
- The backyards of properties in a *favela* may provide a location for economic activities that are noisy or need additional security.
- Spaces devoted to labor vary, but in general they require around eight square meters.
- The space of work is fundamental for a slum dweller.
- Sometimes tools and spatial attributes are shared among workers from different fields for their respective work activities.
- Windows, doors, and other frames are expensive. Houses usually lack ventilation and illumination. Awnings are a frequent adaptation that residents make to protect themselves from the harsh effect of the sun.
- Spatial devices built by inhabitants of a *favela* usually contain umbrellas to protect users from the sun.
- Many service elements of houses, such as pipes and electric wires, are left exposed and retractable to facilitate future expansions.
- Letterboards and painted signs are typically used to designate the kind of economic activity taking place in a home.
- Itinerant, rolling or retractable structures are fundamental to certain working activities in the *favela* because they can be easily assembled and disassembled.
- *Villas* and multifamily structures are becoming increasingly common in *favelas*.
- Dwelling rent is rising in *favelas*.
- The urban porosity that thrives in *favelas* creates relationships between different social classes in Brazil.

REFERENCE NOTES

The initial research for this report was made possible by a grant from the Ministry of Brazilian Education [CAPES] and TU Delft. The author acknowledges CAPES for the support of the doctoral program of the Technical University of Delft (TUDELFT). She also acknowledges Prof. Dick van Gameren and Prof. Nelson Mota for being supervisors.

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