Between Formal Structure and Informal Practice

2 authors:

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Public Space as Catalyst of Change: a Case Study

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Abstract

The complex and contradictory nature of Brazilian society finds its expression in the city of Curitiba. The capital of Paranà State was pioneer in urban politics and practices during the '70s and '80s and is worldwide known for its sustainability. However, the general approach of its urban planning reinforced a spatial segregation that reflects the wide economic and cultural gap among the population.

This research analyses Vila Nossa Senhora da Luz, a marginal district where the failure of land management policies is made visible by the degradation of the public space, the increasing houses' introspection and the poor social cohesion.

The lack of public control represented a chance for the majority of families to initiate an unauthorized development that resulted in a widespread private property speculation. This made of the neighbourhood a paradigmatic case of defeat of public purposes over the management of a social housing plan.

After a summary of Curitiba's urban and housing policies and a contextualization of the selected area, our work proposes a program of urban regeneration which acts through the reform of the urban fabric using a multiple-scale approach. The program attributes the public realm the role of transformation agent or catalyst by promoting participation and the switch from formal (urban policies) to informal (handmade urbanism) strategies.

The chosen strategy, in facts, moves toward the enhancement of the self-regenerative capacity of the urban fabric, distancing itself from the tabula rasa model, still commonly applied in Brazilian urban politics.

Keywords: segregation, public space, adaptive urbanism, informal practice, densification.

8.1 Introduction

> The right to the city is far more than the individual liberty to access urban resources: it is a right to change ourselves by changing the city. [...] The freedom to make and remake our cities and ourselves is, I want to argue, one of the most precious yet most neglected of our human rights (Harvey, 2008)
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This research represents the occasion to question the equity and effectiveness of current Brazilian housing and urban politics, and to bring out the issue of the right to the city for the poorest communities.

The inadequate planning, which is, in Vila Nossa Senhora da Luz (Vila NSDL), a consequence of the failure of the 60' s modernist vision, produced a qualitative regression that finds its expression in the standardized mass housing developments built within the federal program *Minha Casa Minha Vida*.

The most dramatic effects of this tendency toward an extensive city growth, often accompanied by the lack of an adequate planning, emerge on a social scale in the *ghettoisation* of the less wealthy classes, outside the city borders. A research conducted in 2009 on urban disparity and segregation in Curitiba showed the unequal distribution of wealth and of access to services using verticalization as an indicator of areas with higher real estate activity (Polli and Pilotto, 2009). The state action concentrates in these areas, where the upper class lives, the best urban infrastructure and most of the activities, while, in the less privileged neighbourhoods, the public actor is less active and sometimes absent. It is in those areas that the relationship between urban segregation and social problems most clearly emerges.

> At a social level, large-scale segregation arouses feelings of exclusion and territorial dislodgment, aggravating social disintegration problems". (Sabatini et al., 2004)

Vila NSDL represents an eloquent case of social exclusion where spatial segregation is caused by its own structure. At the macro scale this division is defined by an imaginary perimetric wall that marks a discontinuity with the closest neighbourhoods and, at the micro scale, by the obsessive iteration of private walls which reveal a lack of dialogue between the private and the public space. This analysis results from a reflection on the theme of urban renewal, which is already well established in the European context, as an attempt to find a solution for a pressing housing demand. Regularization programs and slum up-grading techniques are signs of a first effort of some Brazilian municipalities toward a dissociation from the logic of *tabula rasa* with the introduction of interventions *in medias res*. The aim is to improve, when possible, the existing situation (see for example *Programa Morar Carioca*, launched in 2010 by Rio de Janeiro Municipality). Considering the increase in life expectancy, the decrease in birth rate, the strong urbanization and the global environmental crisis, good urban design and architecture should think over the sustainability of the current models of city planning as well as over the potential of urban regeneration's tools.

> Compact polycentric cities are the only sustainable form of development and should be designed to attract people. If we don't get urban regeneration right then all our work on cities - buildings and public spaces, education, health, employment, social inclusion and economic growth - will be undermined (Rogers, 1995).

The program of urban regeneration presented here, considers the review of the Director Plan the necessary turning point for a more sustainable development of the area as well as of similar contexts.

Compact cities, through the densification of the built urban fabric, activate dynamics of optimization and sharing of spaces and infrastructures, giving the less wealthy neighbourhoods a good prospects of growth. The desired effects are to offer a way out from the segregation that affects today's popular areas and to trigger a process of social mixing. Considering the socio-economic difficulties of the inhabitants, the municipality is regarded as the main catalysing agent of this transformation program.

The role of the public actor, in facts, not only lies in the mere offering of services and structures, as it is in a top-down action, but should rather take into consideration the real needs shown by the population (bottom-up strategy).

8.2 Methodology

The project has been set up at the Faculty of Architecture in the University of Ferrara and the authors interests led to a research focused on areas with an high demographic and economic growth and where the phenomenon of urbanization is particularly intense. A urban analysis, developed on a global scale, allowed to identify South America, and in particular Brazil, as one of the most interesting case study. In fact, besides presenting a very rapid urbanization, mainly due to the migration of poor people from rural areas to the cities, is also characterized by a rapid economic growth of the middle class.

Vila NSDL, the chosen area, is a district inhabited by low income class but with an high growth potential. This area is the meeting point of two urban and economic realities that have been shaping Brazilian cities for decades: the formal and the informal.

A tight collaboration with the IPPUC, the institution in charge of Curitiba's urban developments, with COHAB, responsible for managing the housing estates of social interest, and with the Universidade Catolica do Paranà and the Universidade Federal permitted to obtain cartographic, legislative and historical material, as well as to understand formal aspects and changes occurred since 1961. The knowledge and comprehension of the informal aspects were enhanced through site visits and using photography as investigation tool. The collected documentation permitted to study the life in the neighbourhood and the modalities of spontaneous space appropriation. The dialogue with residents and employees of public offices allowed us to approach and understand the social and economic conditions of the inhabitants and the way in which both public and private space are used. Once acquired a specific knowledge of the context, the research phase has been complemented by the preliminary phase of the regeneration project of the area. The constant debate with private architecture firms with an expertise in working into similar contexts, made possible to always remained within the limits of the possibility of intervention in terms of economic and technological feasibility.

The developed solutions are here presented not as an exactly reproducible model, but as a set of strategies and design principles related to formal and informal dynamics, easily applicable in many urban areas, both in a Brazilian and global context.

8.3 Context

The capital of Paranà State is worldwide known for the sustainability of its urban structure. This success was obtained thanks to the innovative transportation system, the presence of wide green fields within the built fabric and the use of an effective allocation of urban waste and of efficient recycling methods.

Nevertheless, the complexity and contradictions of Brazilian major cities emerge

even in this context, revealing a difficult urban and social scenario.

The population growth in Curitiba's metropolitan region had one the highest peaks of Brazil during the 70s, when it reached the 5,78% per year against an average of 2,48% of the rest of the country[1]. This phenomenon was only in part absorbed by the urban structure. In fact if, on one hand, the chosen politics helped improving the environmental sustainability, on the other, they failed to contrast the huge social inequality among the population, the peripheralisation process and the marginalization of poor classes. The city's linear development enhanced these aspects, leading to a rise of land value in the areas close to the street axis, along which a major building density was planned and a capillary network of services and means of transportation was provided.

Polli and Pilotto (2009) assert that this step toward the estrangement developed starting from the '70s and was followed by a second phase during the '90s. With the rapid population growth and the appearance of new social and economic actors, both the central and peripheral space have been reshaped, leading to the so-called "city of walls" (Caldeira, 2000).

The result of this process is a new spatial organization based on the self-exclusion in gated communities where many services and benefits are assigned and privatized, preventing part of the population from their fruition. The proliferation of these luxurious, self-sufficient and inaccessible islands, is nowadays one of the main symptoms and etiologic factors of the decadence of the historical centre, increasingly destined to services and less desired by the residents. From this analysis emerged that the relationship between centre and periphery changed in the last decades, defining the concentration of different social classes within marked urban boundaries. The logic behind this division derives from economic as well as ideological factors. It is clear how the fear and prejudice reinforce and worsen the alarming separation of the social classes. The consequence is the failure of inclusion and collaboration necessary to the progress of an heterogeneous and dynamic society.

The strong urbanization, begun in the '60s, was satisfied neither from the formal market offer nor from the massive state interventions. The effect was the reinforcement of urban informality, which characterizes nowadays more than the 33% of the global population and the 23,5% of Latin America and Caribbean[2].

In Curitiba the informal phenomenon has grown from 2.213 homes in 1971 to 49.706 in 2012. In that year the census revealed that 163.301 people were living in informal settlements. In 1965 as a reaction to the increasing housing deficit, two authorities were established. The IPPUC, created to satisfy the need for a new preliminary city plan, elaborates the guide lines for the organization and development of the city, by defining the land use and indicating the virgin areas to be destined to new social housing plans. COHAB, instead, was founded to facilitate the access to a property house for families with an income up to 10 minimum salaries. In 40 years it helped 120000 families, bringing benefits to more than 450000 people (Fig. 1).

The first big plans for social housing begun at the end of the '60s, as an answer to the critical situation of informal occupations that reached a proportion hardly controllable by the municipality. Under the military regime (1964-1985), the adopted

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1IBGE data

2Un-Habitat data

urban politics supported radical interventions aimed at the demolition of the favelas and the relocation of their inhabitants in mass housing developments which lacked of infrastructure and basic services and that were far from the city.
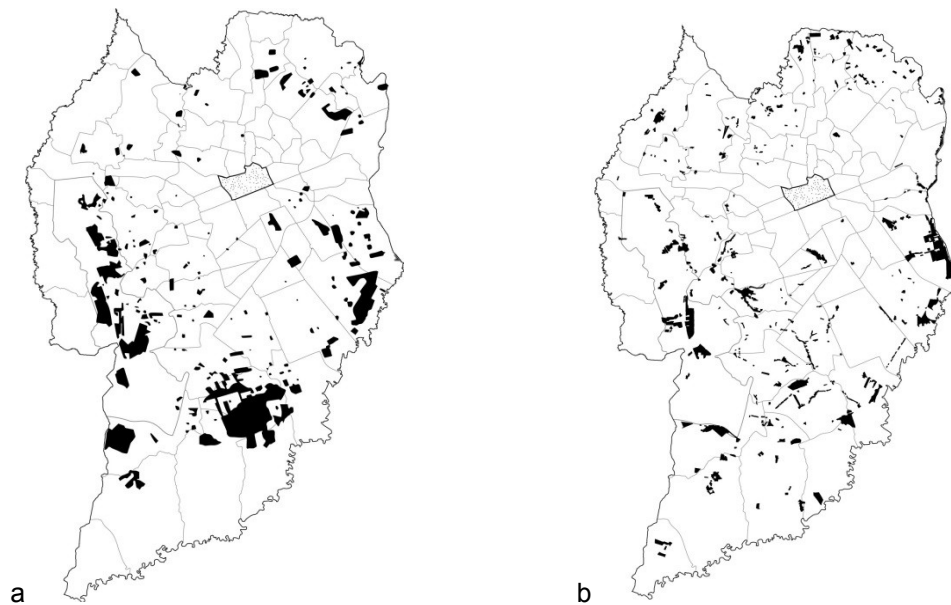

a   b

Fig. 8.1 a COHAB housing development in Curitiba, **b** Irregular occupation in Curitiba

8.4 The Case Study: Vila Nossa Senhora da Luz

Vila Nossa Senhora da Luz do Pinhais (Fig. 2), first housing development in the Paranà State, was built in 1964, when the military government, guided by the Marschal Humberto de
Alencar Castelo, decided to stunt favela's expansion in the paranensis capital. It was planned
in the wake of Cidade de Deus and Vila Kennedy (Rio de Janeiro) to accommodate low income families removed from favelas.
The process of families' selection, the decision about the location, the planning and the management of construction was promoted by COHAB (Companhia de Habitação Popular), financed by the BNH (Banco National da Habitação), and supported by US funds, with the supervision of the technical manager Arch. Alfred Willer. The project regarded a total of 2176 houses on a 800.000 m^2 land. The selection of the target families made clear from the beginning the problems of managing such intervention. Many of the homes, in facts, were allocated to families with an unstable economic situation while others were assigned to families included in the lists of COHAB (Vasconcelos, 2012). The acquisition of the house property was based on a monthly mortgage payment, with a duration of 20 years, that should not exceed the 20% of the family's income. However, only the 10% of the families could

guarantee a fixed salary and the respect of the minimum requirements. Consequently, in a first phase, as the lack of connections between the area and the productive activities had provoked a widespread discontent and a sense of isolation, many families decided to sell their new dwellings and move back to the city.[3]
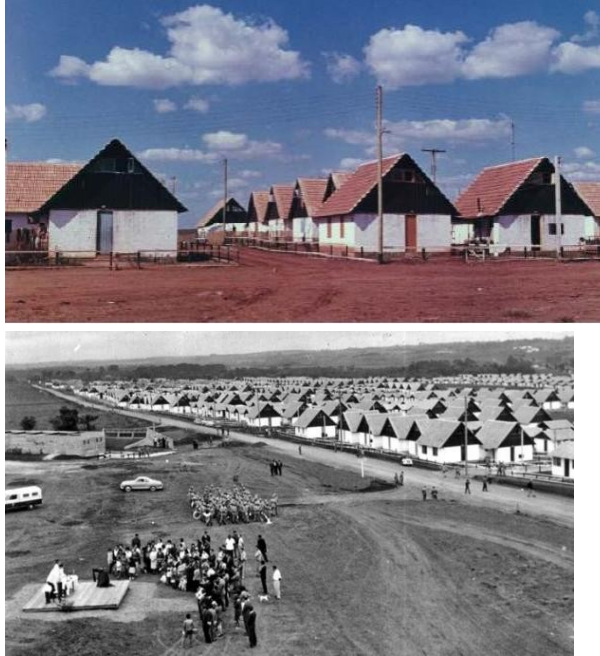

Fig. 8.2 Historical photos, 1966 (source: IPPUC)

After the rise of the industrial city (CIC), which is nowadays the most important industrial pole of the state and provides employment for 200.000 people, the neighbourhood started to be considered a good place where to live and work. A progressive improvement of the inhabitant's living conditions followed the general socio-economical advance.

8.5 The Informalisation Process

The choice to focus the research on this specific area derives from its hybrid condition: Vila NSDL is a mediation between a collective and planned process and the result of individual and spontaneous actions. This informal densification left traces in the relationship between built space and urban voids.
The 1964 figure ground plan (Fig. 3) shows an urban fabric and a parcelling plan clearly inspired by the American suburbs, where the urban sprawl was associated to

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3COHAB tried to prevent the houses from being sold but no brazilian law represented a legal way to impede this widespread phenomena. In facts, the citizen who receives a home from COHAB signs a Deed of Purchase and Sale which, for the Brazilian Constitution, gives him all the rights on the purchased property, including the right of selling. Sometimes COHAB imposes some conditions in the sales contract by defining a minimum period of time before the house can be transferred to another person, however this does not stop the sales because people make use of the so called "contrato de gaveta", a private agreement between the parties unrecorded in the registry.

an individualistic way of living: the sense of belonging to a community was replaced with the exasperate research of privacy and the demarcation of private property's boundaries.

Within the 9x18 m plots, two types of "embryo house" were placed: the smallest one was 21 m^2 while the other was 50 m^2. The minimum cell, as Willer explained:

> served as an initial element of a symmetric future growth of the house, therefore the plots had a sufficient size. Once the residents settled there, they received the embryo, which was the most complex part of the house, and afterwards, with their own resources, they could broaden, by adding other rooms or by raising the living room, and so on (Vasconcelos, 1991).

At the beginning, public and private space were visually continuous: small fences marked out the properties, allowing the life within the private gardens or behind the windows to be manifested in the streets. The transformation process started about 10 years after the creation of the neighbourhood, when the inhabitants, thanks to the industrial development of the CIC that provided a work for them, reached a sufficient economic condition to allow them to improve and sometimes rebuild their houses. Nowadays, Vila NSDL presents a very different appearance due to the layering of time and the constant work of its inhabitants that adapted
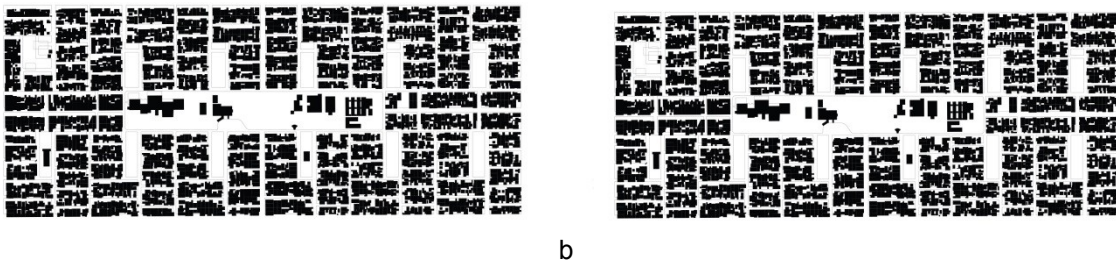
a   b

Fig. 8.3 a original plan, 1966, **b** actual plan, 2014
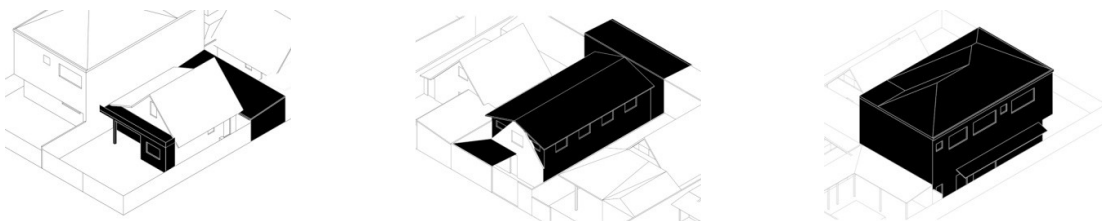
Fig. 8.4 Methods of densification due to informal practices

their plots according to their instant needs and the growth of their families. Time after time, despite the area became better equipped with infrastructure and community services, the private space started to take a physical distance to the public one. Sometimes this detachment is expressed through hedges, fences or small walls while in many other cases the introspection is emphasized by the plot saturation. The original units were 3 to 5 meters set back from the front but their expansion has now replaced the garden and in many cases it has been extended until the street. Despite the current regulation classify the neighbourhood as SEHIS (public housing area)

with a building index that permit to cover up to the 50% of the plot surface with a maximum of 2 storeys, the alterations leaded the majority of the plots in an illegal condition.

A survey conducted by IPPUC in 2000 on 451 plots revealed that only in the 55% of the cases the original houses were still visible, only 23 plots were densified within the legal limits, 174 were occupied between the 50% and the 75% of the area while the remaining part had an even higher degree of occupation. To maximise the income, many families subdivided their plot and rented a part of the house. The result was a switch from a single-family to a multi-family dwelling typology and several plots currently host up to 4 family units.

If the private transformations provided immediate and pragmatic solutions for the individual necessities, without any evaluation mistake produced by a top-down planning strategy, this dynamic contributed to lower the quality of the urban environment and to induce a strong introspection.

8.6 Segregation

Vila NSDL represents a case of socio-spatial segregation of the underprivileged classes and it is possible to identify three degrees of this disconnection related to socio-economic and urban reasons.

Fig. 8.5 Examples of different housing modifications

The first level concerns the isolation of the neighbourhood from the surrounding urban environment. As pointed out above, the reason is identified in the modernist structured plan of the area which, conceived as a self-sufficient unit, remained, in the first decades, isolated in a virgin land at the fringe of the city. Afterwards, when industrial plants and new residential developments started to occupy the surrounding areas, no integration between the parts occurred. This generated many problems that intensified the stigmatization suffered by the slums.

The second level is recognizable within the inner structure of the neighbourhood. A small scale analysis brought out that the rigid borders among public and private space, the centralization of services and the dislocation of commercial activities along two main axes, generated a lack of continuity between the residential blocks, causing a neglect of the interstitial spaces where drug dealing and phenomena of

micro-criminality ordinarily take place.

At last, the urban segregation and degradation are reflected at the private scale where the lack of social cohesion, the fear and suspiciousness of the inhabitants is manifested in the increasing houses' introspection (Fig. 6). From this point of view Vila NSDL represents an anomalous situation in the wider context of the low-income classes in Brazil who usually take advantage of collaboration, social integration and resource sharing.

8.7 Degradation of Public Space

Dead public space is one reason, the most concrete one, that people will seek out on intimate terrain what is denied them on more alien ground (Sennett, 1974).

The closure of the private plots is cause and effect of the public realm malfunctioning. The use of Carmona's model (Carmona 2008) – which shows the characteristics and the physical expressions a good public space should present – make clear how the poor quality of space design, the lack of public utilities and of an adequate structure cause in Vila NSDL's inhabitants the refusal of these areas. Open public spaces are frequently left without a function and a character, causing a strong environmental and perceptive decay. From a morphological point of view, the disproportioned dimensions of the squares and the lack of

Fig. 8.6 Enclosure of private fronts

semi-public spaces are a further cause of this deterioration.

Where the squares do not host buildings, the degradation is even more evident. The presence of accidental and abandoned elements of urban design, such us an old goal post, a broken rubbish bin, a rusty slide and some randomly planted trees are clearly not enough to qualify the space and provide it with a function. Moreover, the lack of structures for the garbage collection within the whole neighbourhood, make of the public space, literally, a dump.

The public buildings, conceived as they are as self-sufficient "small islands, like flying saucers that came down and took place there" (Vasconcelos, 2012), are only used for their specific functions and they never create the conditions for the encounter or stimulate the premises to build a sense of community,. Nowadays, these islands

provoke only a sense of distance and isolation while the concentration of all the public services in the central area caused a loss in the perception of the space and a sense of aloofness. In addition, the used typologies, self-referential and always enclosed by walls or other kind of physical barriers, define what Sennett (2008) calls "boundaries": limits that prevent any relationship between the buildings and its surrounding space by restricting their accessibility and nullifying their role of support for public life.

The importance of the relationship between viability and liveability was clarified since the earliest Gehl's theorizations based on an analysis of the Danish context and was demonstrated by Hertzberger's design strategies success, applied to the Dutch experience (Avosani 2010).

The inhabitants refusal to dialogue with what is external to their own "fortification", makes the outer space something alien and rejected.

8.8 Strategy: Self-regenerated city

A series of interventions is proposed here to face the problems already emerged. They set out a vision for the sustainable regeneration of the neighbourhood by making it compact, multi-centred, socially and functionally mixed, connected, environmentally sustainable and self-changeable. The need to upgrade the existing urban fabric and to use the derelict public squares as catalyst of a new degree of complexity, derives from the belief that:

> [T]he problems that beset many of our communities are not solely the result of the degraded physical state of our towns and cities, but they cannot be solved without reference to it. The built environment provides the physical framework for all our institutions and government programmes - social and economic regeneration, community safety, education, transport and health. These will all fail unless we can deliver the physical context which allows them flourish and bear fruit (Rogers, 2002).

In this work the abovementioned physical context is represented by the public space, whose meaning is based on the impression that is capable to leave in people's imaginary and, at the same time, on the habitual practises of its users that contribute to determine it. Thus, the co-production of public space is promoted through the participation of the inhabitants in the planning, maintenance and management phases. Starting from a redefinition of the role of public as engine of the transformation, a new interpretation of the neighbourhood is presented. In order to facilitate the exposure of the regeneration program, some transformation tools or catalysts are introduced.

8.8.1 Densifying the City

> [A] dense and socially diverse city where economic and social activities overlap and where communities are focused around neighborhoods (Rogers, 1997).

Compact cities are sustainable on a social and ecological level: they need a lower amount of energy and they allow a more efficient use of infrastructures. The

presence of many inhabitants in a small and dense area implies a rationalization of the use of collective spaces and resources and, at the same time, protects the natural landscape from the exploitation provoked by the urban sprawl. Actual housing models, both for individual dwelling units and anonymous massive housing, do not usually give the social dimension and the collective aspect connected to the living, the importance they deserve.

Rethinking fabric's density in Vila NSDL implies to review building indexes and reshape the limits (formalize) within which the community, rather than the single, could, with a certain degree of flexibility, adapts the city to its needs (informalize) (Fig. 7).

Discouraging cars' use   Encourage pedestrian and cycling traffic is the first step toward an independency from cars and the definition of a new identity for the streets, currently a space for individual transit rather than a gathering place.

Reconsidering the building indexes   The number of people waiting for a house is growing as well as the population living in informal areas. The regular formal market and the federal programs revealed themselves to be unable to give an effective answer to the problem. Moreover, the lack of virgin lands within the municipal boundaries suggests a reflection over the theme of building within the built. Public officials already recognize the necessity of reviewing urban indexes to regularize the housing expansions where they do not present hygienic and security vulnerabilities, and to allow inhabitants to better adapt the place where they live to their needs (Lindsay and Lafaiete, 2011). The process must be regulated by strict laws in order to limit the speculation and to promote the permanence of actual residents in the neighborhood.

Building in the urban voids   Eight out of twelve squares located in the area are not built nor provided with any function. To undersize them and to reshape their morphology, the
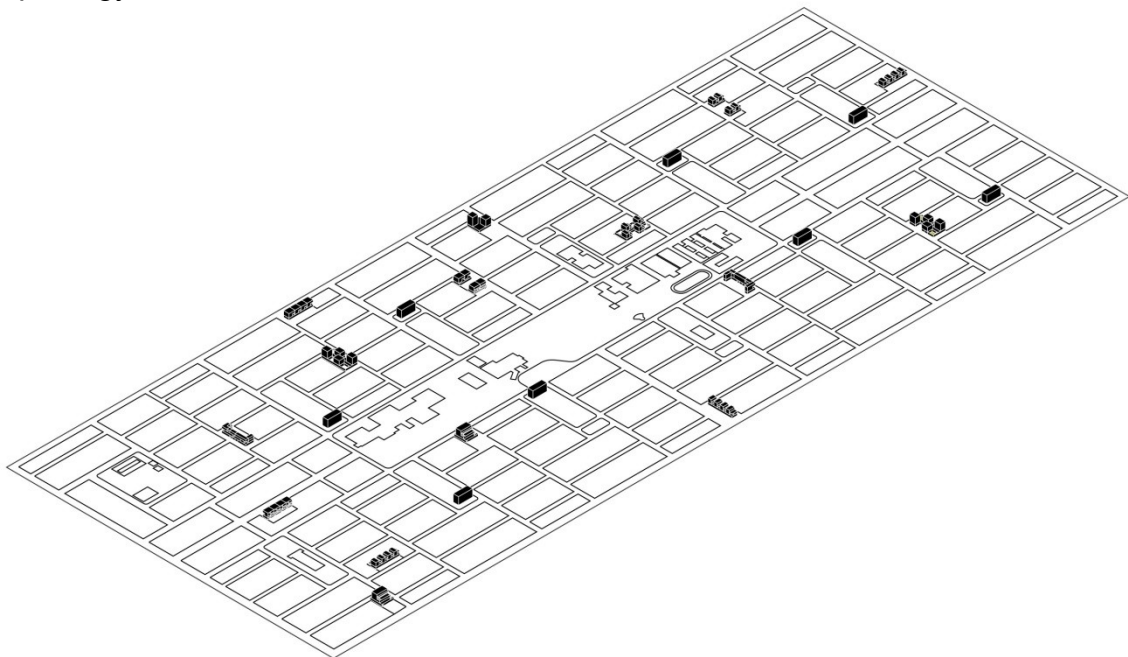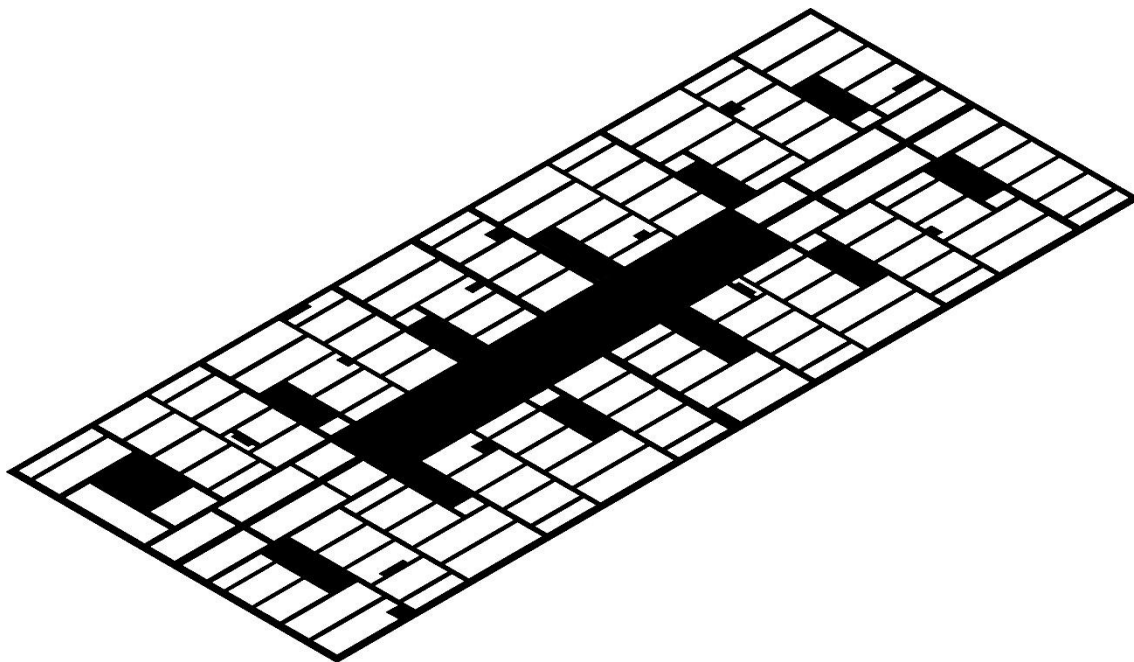
Fig. 8.7 Densification of the urban tissue

municipality should use them to build new residences and public usable objects with the effect of re-qualifying the surrounding space.

8.8.2 Fragmenting the Urban Structure

Vila NSDL is the product of the functionalist logic that lies behind the modernist urban planning ideal. The attempt to reduce complexity through the obsessive repetition of a grid-based scheme that orders residential blocks and open spaces, turned the public core into a no-man's land. The adopted strategy introduces a higher level of "disorder" by means of articulating, fragmenting and reinterpreting the existing urban structure. Public spaces, when led back to a more human scale and equally distributed within the urban fabric, rediscover themselves as *agorae*, where public and semi-public functions coexist, where the physical and intellectual accessibility becomes expression of a more inclusive and cohesive community (Rogers, 1997) (Fig. 8).

Subtractive and additive logic   The role of municipality in the urban renewal program consists in the faculty to change land uses and to reestablish densities both for the public and private context. The vehicle of negotiation and equal-distribution is used to counterbalance the relationship between the built and the empty space. The plots, chosen in relation to their bad conditions and in collaboration with the residents, could be demolished and converted into new public spaces. The random distribution of these plots produces a fragmentation of the public space. The involved families can be relocated into new dwellings, built within the major squares or in new cooperative multifamily houses, whose construction would be promoted with public incentives such as the management of the new public space.

Fig. 8.8 Fragmentation of the urban tissue through the openings of new micro open spaces

Decentralizing public functions   Nowadays, the collective buildings (schools, churches, medical centres, sport fields, libraries, etc.) are clustered in the central area and in some of the inner squares. Following the fragmenting strategy, they are deployed in different poles with the aim to activate the less dynamic spots.

Subverting the zoning rules   Except for the two main axes, where the commercial activities take place, and the collective squares, the whole neighborhood has only a residential function.

Some informal interventions demonstrate the will to create new forms of widespread micro-trade spots. In many cases, garages are used as workshops, warehouses and even the parked cars are used to sell goods while facades are often painted and used as advertising canvases. The project suggests a new spatial order, based on the real needs of the inhabitants, able to encourage a *mixitè fonctionnelle*.

Reinterpreting the residential block   The modernist structure associates the rigid street network to the definition of the residential blocks.

The project activates a process of transformation through a new proposal for the housing blocks. These have to be permeable, morphologically and typologically heterogeneous and capable to stimulate different and capillary flows.

This new logic of densification and collective living has to leave space to semi-public elements in order to reconnect the individual to the community.

Fig. 8.9 Activation of functional connections

8.8.3 Activating Living Network

Cities are networks of people, activities and places. Each connection takes place and is drawn by the basic elements of the public space: the street, the square and the sidewalk. The role of public space regards not only the creation of a physical space where interactions between individuals can occur, but it also concerns its being an instrument to encourage or discourage social activities. The interventions aim to break the monotony of the urban fabric,
which is now characterized by almost identical streets and empty, undefined squares. Open spaces must regain their attractive nature and catalyse new social dynamics, while the continuous net of the streets should provide spatial continuity, "influencing how people experiences the spaces and also how they move within the neighbourhood" (Pinto et al, 2010) (Fig. 9).

Creating new urban poles   New spaces for the community and structures to support the precarious informal activities within the neighbourhood are created. The market square, for example, will become an area to host stable trades, like small fairs connected to the adjacent urban gardens, as well as temporary commercial activities by providing electrical and watering supports and temporary structures.
The activation of new attraction poles also regards some of the sites outside Vila NSDL. A green path, for example, is extended until Parque dos Trabalhadores, currently inaccessible and dangerous but interesting for its endangered flora, such as the Pinheiro do Paranà.

New functional paths   The disconnection of the urban fabrics is solved, directly, through the alignment and the opening of new streets and, indirectly, through the installment of architectural elements like plants, urban furniture, pavements etc. The new inner connections are diversified according to the nature of the closest square, from which they take some elements that are used to contaminate the public and private space.

Introduce a street's hierarchy   The existing street network does not show a clear, hierarchical structure. All the streets are quite narrow (6 m), except for the commercial ones (12 m). The circulation is not defined or respected and no care for the pedestrian is shown. The regeneration program proposes a reorganization of the street network by defining pedestrian friendly streets, inspired by the Dutch *woonerf*, one-way vehicular paths for faster transit, and more intimate and residential avenues.

8.8.4 Operative Tools

Public action acts primarily through a process of negotiation between the public offices and the residents from a minimum of four plots, promoting the creation of cooperatives by offering incentives such as the change of the building index, the possibility to open commercial or professional activities on the ground floor or the management of new public space (urban gardens, workshop. etc.). A second possibility consists in the assignment of an alternative house, built in the closest urban void. The funds gained from the sale or the concession of the rest of these new properties are used to improve new streets paving, trees planting and urban furniture.

Furthermore, private action can be stimulated through a correct information by promoting the access and participation to the following state programs for funding and support:

- Minha Casa Minha Vida - Entidades (direct effect): allows the access to subsidized loans for families or individuals, grouped in collective forms (associations, cooperatives, trade unions), with a net income up to three minimum salaries (SM 2014: R $ 724), for the construction, acquisition or renovation of residences in urbanized environments
- Aprendizagem Serviço Nacional de Industria (indirect effect): it offers free training courses across the country and it increases professionalisation, practical knowledge and self-construction skills
- Serviço de Apoio às Micro e Pequenas Empresas (indirect effect): it provides support for initiating small businesses
- Serviço de Apoio às Micro e Pequenas Empresas (indirect effect): it provides support for initiating small businesses

8.9 Conclusions

There is no logic that can be superimposed on the city; people make it, and it is to them, not buildings, that we must fit our plans (Jacobs, 1961).

Vila NSDL demonstrates the ineffectiveness of the attempt to build a public character through the imposition of an *a priori* design.
From the beginning of the '60s Curitiba experienced a significant population growth, without reconsidering its expansion strategy. Its boundaries were widened until the limit of the municipal territory with the creation of new housing developments, only later connected to
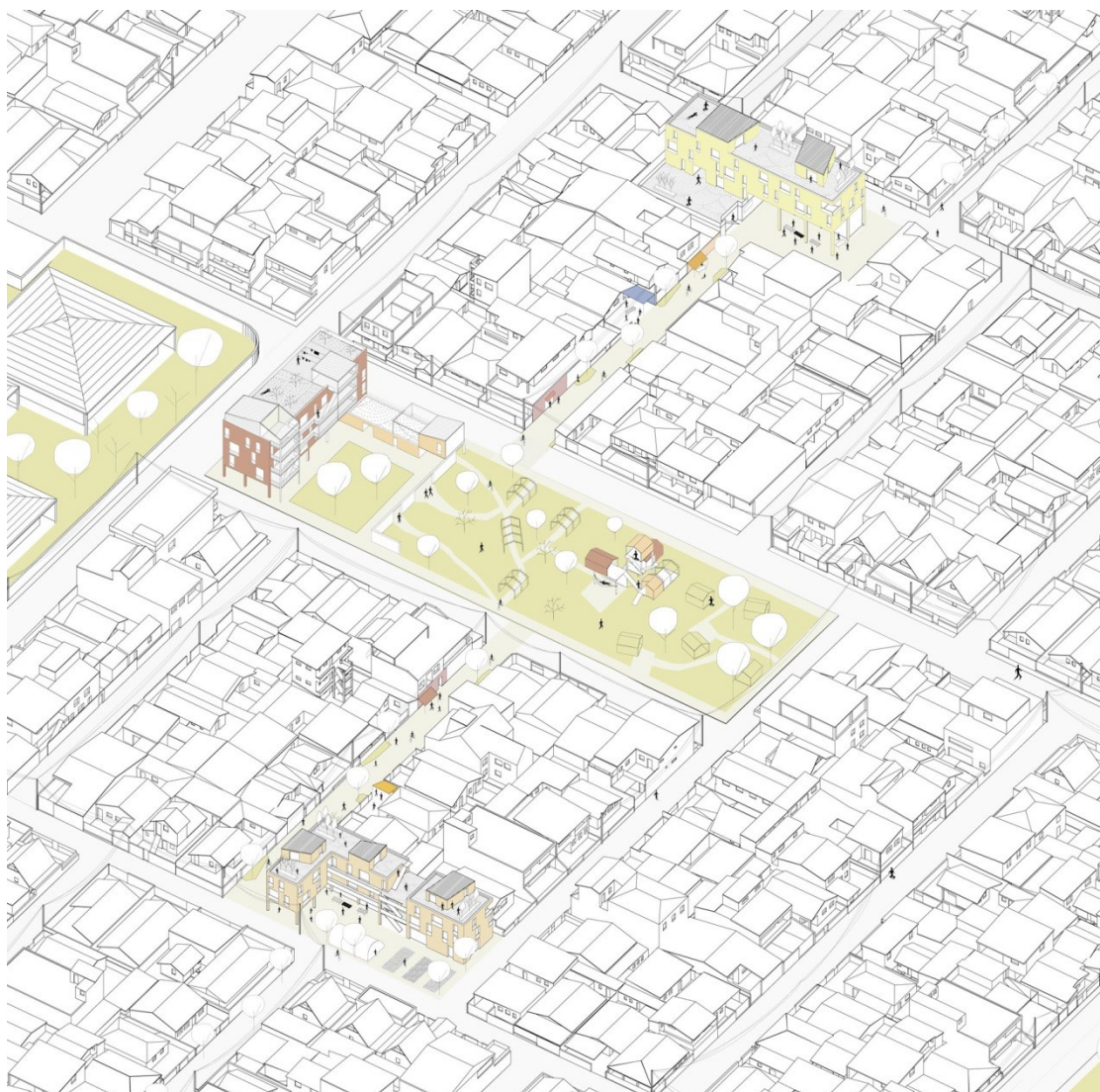
Fig. 8.10 The network of shared and co-produced public spaces

the city centre.

Nowadays, while the infrastructure network is reinforced to establish a connection with the marginal neighbourhoods, 80.000 people are still waiting to receive a house from the government through COHAB intervention.

The increasing land consumption and the urban sprawl are unsustainable, neither in the dense European urban fabric, nor in emerging cities as the Brazilian ones. For this reason it is necessary to reconsider the urgent dwelling issue according to sustainability standards through a rationalization process of the built environment, allowing the public space to regain its social function. In a context of socio-economic and cultural difficulties such as Vila NSDL, an initial intervention of the public realm becomes necessary to initiate a "stitching" process of the urban fabric. Through a direct intervention on specific sites it is possible to eliminate physical and psychological barriers that nowadays paralyse the individuals in their own condition. The development and reinterpretation of public space should occur through the rediscovery of spaces for the community and the encounter as fundamental elements

of a socio-economic growth. Moreover, the citizens are taught how to improve their condition and they acquire new abilities through an indirect approach that regards information and logistic support.

In conclusion, the transformative potential of Vila NSDL does not have to be searched elsewhere but in its own dynamic structure and in its inhabitants' ability to adapt the environment, as they demonstrated on a private scale, to the constant change of conditions. In their informal practice and through an adequate formal motivation lies the self-regenerative capacity of the city, the input for the creation of an additional degree of complexity that characterizes most of the European historical cities.

This idea guides the project, or rather, the program of urban regeneration: the urban voids will be turned into a network of shared and co-produced public spaces; places where the identity of each citizen is mirrored and fed and where the residents, through a collective commitment that do not undermine their own individuality, could contribute in the construction of a more equal and cohesive community (Fig. 10).

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