

## **Facing urban redevelopment in developing countries**

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In the last 25 years, several approaches have been developed to reinforce the concept of compact city in opposition to the unlimited growth (continuous or sprawled) that many cities have faced ever since the second half of the 20<sup>th</sup> Century. The possibility of using public transportation instead of private vehicles, high population density and urban life in areas that grew as a continuation of former urban nucleus caught the attention to the redevelopment of industrial peripheries of the 19<sup>th</sup> century with the conviction that new urban areas “re-colonized” in the inner city would respond to many demands of urban areas, restraining the expansion.

This article analyses the redevelopment as a phenomenon that has been taking place in the last 25 years by means of the cleaning of pre-existing industrial sites, railway areas and ports in several early peripheries, territories with available sites for redevelopment. The introduction of new activities could create an atmosphere of urbanity in places usually considered as marginal when compared to any “central” city. Housing but also new cultural facilities, services, offices and new infrastructures are set up in areas previously occupied by industrial activities, integrating these urban fragments with the central areas, besides bringing a metropolitan importance to them.

Redevelopment, during the last 25 years, has brought up many dimensions subjected to analysis. Regarding the neighbourhood context, benefits derived from the improvement of the area ? as redevelopment upgrades the environment changing the 19<sup>th</sup> century industrial atmosphere ? are relevant dimensions of analysis. On the other hand, redevelopment adds a new population profile to those urban fragments (since there are usually few residents living in the sites under transformation), creating an impact on the surrounding areas. Related to the context of the city, the benefits for the housing market are subjected to analysis, because, differently from renewal or rehabilitation, they increase the housing stock. As for the metropolitan perspective, redevelopment can be seen as an alternative to richer residential areas which emerge sprawled in the territory, configuring a substitutive policy by offering new housing without reinforcing urban sprawl. In the same way, it can be questioned if redevelopment would act equally if the demand was related, instead, to affordable housing, usually placed at the edge of the city through urban expansion processes. This last dimension constitutes the focus of this article.

By analysing how transformation procedures lead the program to establish a distinctive household profile, this study intends to evaluate the restrictions on this policy in order to be considered an alternative option to the demand of an housing market that usually searches for the outcome of urban expansion, especially in developing countries.

When comparing procedures regarding the preparation of land for urbanization or re-urbanization, redevelopment tends to force an initial land price. This initial price considers mainly the infrastructures, while other processes allow (although not desirable) infrastructures to be developed later. That leads redeveloped areas to present prices higher than those of the surrounding neighbourhood. Affordable housing tends to be developed in those projects either as a result of a guided policy or as buildings with bad spatial conditions. Market prices between redeveloped and non-

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redeveloped areas show a great contrast in the first moment immediately after redevelopment is finished.

But as time passes, redevelopment impacts on the whole neighbourhood generating a raise in price because the surrounding areas benefit from a succession of planned or not-planned improvements. Affordable housing remain as “islands” of price control, not as natural outcomes of the market, in this new local context.

In developing countries, social inequality tends to produce spatial ghettos of poverty, and housing demands come mainly from low income householders. As regards the social aim of generating affordable housing for poor segments of the society in those contexts, redevelopment tends to be an inefficient policy, because it usually produces spaces only affordable for householders who could at least have funds for part of the rent. This social selection excludes the poor segments, the main focus of housing policies in developing countries.

Unfortunately, there are hardly any policies of that nature already consolidated in developing countries. Buenos Aires's Puerto Madero transformed the port site mainly into a leisure area, where housing impacts can't be barely analysed in this experience. In Brazil, experiences in Rio de Janeiro and São Paulo are still under planning. This makes difficult any data collection that would allow the observation of redevelopment effects on the surrounding neighbourhood. Those data require the process of incorporation of the redeveloped urban fragments in the neighbourhood dynamics, meaning an extended time of implementation. For this reason this research decided to analyse cases already consolidated, selected from the European context in which this sort of policy has been developed in large scale during the past decades. In the European context, data concerning housing price analysis were collected for both implemented Barcelona Poblenou's redevelopment and Paris Quartier de la Gare's case. São Paulo's Bairro Novo Competition was also studied to contrast the aforementioned realities, although housing prices were not a comparable variable, as the project is still under planning. Since the characteristics of industrial neighbourhoods in the early peripheries are similar in cities that passed through industrialization process during the second half of the 19<sup>th</sup> century, it is possible to establish many comparable elements and behaviours, even between divergent economic contexts.

Therefore, facing redevelopment in developing countries actually means to determine what could cities in developing countries deciding to apply redevelopment policies learn from already consolidated experiences: does it represent an effective alternative to the demands of the affordable housing market urban expansion?

To answer this central question the article is divided in three parts.

The first part explains the specificity of redevelopment in the last 25 years. Industrial decentralization, the revaluation of the vernacular and the argument towards sustainability lead to a common agreement in favour of transforming the inner areas of compact cities in order to profit from the centrality of those zones in the sprawled metropolitan context.

The second part explains how the initial cost of urban redevelopment is appraised. Then, the urban context in which redevelopment takes place is described so that the difference in price observed between adjacent areas can be understood as a consequence of the distinctive urban landscape created by means of redevelopment. Prices between redeveloped and non-redeveloped areas are compared, describing the impact of this transformation process. Finally, how affordable housing is provided in some experiences is portrayed to help understand why those areas are conceived as exceptions in the housing market context of the neighbourhood.

The final part presents conclusions about redevelopment effects on the neighbourhood and on the metropolitan perspective. The restrictions of adopting redevelopment by replacing other formulas that answer the housing demand are explained. The positive effects of redevelopment supporting this urban policy are described.

In accordance with the conclusions, the arguments shown in this article do not reject redevelopment, since the many positive effects that the urban transformation has offered to former industrial peripheries in the last 25 years are undeniable, but they rather deconstruct the direct relationship often presented by supporters of redevelopment as a consistent policy to generate affordable housing as an option to those generated by urban expansion policies.

## 1. Transforming inner areas: the arguments employed

### 1.1. The industrial decentralization process in urban centres

The growth of metropolitan regions in the second half of 19<sup>th</sup> Century is coincident with the industrialization process. In that period, the working force gained importance as a resource, transferring the production to sites near the existing urban nucleus. New industrial sites and new infrastructures were built in the outskirts, serving as new poles for urbanization. The embryo of the early peripheries lied along roads that linked the urban nucleus to other towns. Railways also offered interesting locations for industrial sites as production could be easily transported and distributed. Cities with ports finally became the terminal point of this industrial distribution and of the conjunction of the main commercial routes, leading to the development of new urban areas.

The second growth boom is associated to the post-war period, characterized by a model of low densities mainly composed by single family houses, in a sort of distortion of the garden city model of the 19<sup>th</sup> century. The successive peripheral belts moved away from the urban centre, not only in terms of physical distance but also because of the morphological referents used: the new housing areas were organized as discontinuous built-up spaces, in self-contained units, emerging near infrastructural nodes or sprawled in the territory, connected to the centre by highways.

In this territorial scenario, it became more profitable for industries to move to city edges where land competition with other uses was minimal, initiating a decentralization process. According to DiPasquale & Wheaton<sup>2</sup>, two elements contributed to this option.

On one hand, the fact that manufacturers store goods in large, single horizontal structures means that changes in production and storage methods increased the amount of land used per unit of output by industrial firms. Searching for less expensive land, the industries began looking for spaces undesirable for other uses, such as highways and airport adjacencies. For industries, those spaces meant cheap land and points with high accessibility.

On the other hand, DiPasquale & Wheaton also point out the fact that transportation technology changed to a more dispersal model. Railway system that guided the location of 19<sup>th</sup> Century industries turned to be more flexible and integrated to other systems. Especially, the development of dispersal patterns of highways and the increase of truck transportation allowed industries to be placed in different points of the

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<sup>2</sup> DiPASQUALE, D. & WHEATON, W. 1996. Urban economics and real estate markets. New Jersey, Prentice Hall, p. 102-103.

territory. Industrial location logic changed from the sites near to railway terminals to a pattern in which is the highway system that reaches the industry.

Since the 1960s many central areas (especially the early peripheries formed in the second half of the 19<sup>th</sup> century) faced a process of industrial abandon, caused by a progressive deindustrialization process. Large amounts of land became vacant because the biggest firms moved to the edges of the cities. Buildings and structures inside industrial precincts became obsolete, but several small manufactures remained as there were not enough funds to move away. By the same time, many new port areas were constructed in big cities<sup>3</sup>, turning obsolete the former ones. Real state market initiated a pressure over those areas, including not only small firms but also the remaining railway and ports infrastructures.

In this new metropolitan reality that emphasizes territorial discontinuity, the relative centrality and the distinctive urban continuity observed in the first historical peripheries have marked their role as possible spaces for urban redevelopment in the last 25 years. These early peripheral sites were disputed by market interests as possible spaces for different uses other than industrial.

In this context, many theoretical approaches to those "vacant" spaces were developed, such as the concepts of "*terrain vague*", "*friche industrielle*", "*aree dismesse*" or "derelict lands". Beyond many of these concepts relies the argument in favor of the redevelopment of central areas, because those vacant areas might represent spaces of opportunity for new uses, such as housing, leisure and shopping. According to this argument, the transformation of industrial urban fabrics in the early peripheries could bring more urbanity to the neighborhoods than that of previous marginal activities.

## 1.2. The revaluation of the existing

With post-modern movement, the city is analysed as a sum of superposed layers representing the past moments of urban growth. Urban fabrics are seen as necessarily fragmented, in a collage of multiple uses, many of them ephemera. In terms of urbanism, new principles reject the large scale rational planning of the post-war, defending the diversity in the cities<sup>4</sup>.

The existing urban spaces are no longer object of rejection. Instead, many urban and architectural tendencies defend vernacular principles, such as mixed uses (instead of zoning), high densities that allow a great variety of householders and housing types (instead of low densities and segregation resulting from the modern movement). It became a conviction that the city should be intervened by urban fragments, in such a way to respect its history and surrounding areas, leading to the development of new planning, project and management instruments.

Coinciding with the tendency towards the redevelopment of industrial fabrics those new instruments were applied and improved in many of such urban operations. These planning and managing mechanisms delimit strict perimeters of intervention, avoiding the reproduction of massive urban renewal actions of the first half of the 20<sup>th</sup> Century. The ZACs-Zones d' *Aménagement Concerté* in Paris, the *PERI-Proyectos de Reforma*

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<sup>3</sup> Rio de Janeiro's port changed from the former docklands to the neighbourhood of Cajú ; Amsterdam former eastern docklands became obsolete, since the new Western Docklands started functioning in a container system; London Docklands also lost importance to other southern ports or international ports (Rotterdam), turning obsolete many of its 8 square miles.

<sup>4</sup> HARVEY D. 1990. *The condition of Post-Modernity: an enquiry into the origins of cultural change*. Cambridge: Blackwell publishers.

*interior*, in Barcelona or the *Sleutenprojects* in Amsterdam are the instruments used to develop this process of urban transformation.

Since the 1970s, the Cultural industry formed with this new movement has motivated big corporations to invest in art, history and cultural heritage. Urban regeneration and urban rehabilitation are resultant policies of supporting movements towards the urban transformation by fragments, which could profit from the opportunities (vacant plots, obsolete structures and available areas) given by the deindustrialization process of big cities.

In American cities, replacing the post-war renewal policy, based on large public works (high-rise structures and high-speed expressways), the 1970s saw the introduction of the revitalization concept, reusing industrial areas such as ports and factories. Peter Hall<sup>5</sup> points out Boston's Quincy Market and Baltimore port revitalization as paradigms of this movement, based in the inclusion of leisure and commercial activities in those spaces, as well as in the rehabilitation of old buildings, recovering the "past traces of industrial America".

With the post-war urban sprawl that moved the middle class housing away from the city centre, the urban core was occupied mainly by business or marginal householders. The cultural movement (also associated to a new social profile: the 1980s yuppies) led to the rehabilitation of the downtown area. That meant reusing old spaces in traditional 19<sup>th</sup> century industrial neighbourhoods, by converting old warehouses into lofts<sup>6</sup>.

In Europe, as well as in many Latin-American contexts<sup>7</sup>, the city centre was not completely abandoned as residential districts but old parts were rather deteriorated. Revitalization focused primarily the historical centres, reforming old buildings with modern standards of ventilation, lighting, lifts and sanitary facilities, and improving urban spaces, such as squares, and urban furniture. Many policies also fostered new uses and the introduction of attracting activities: new museums, cultural centres, libraries, art galleries, fancy restaurants and boutiques.

The next stage was to improve peripheral neighbourhoods, in order to create a multi-centred metropolitan structure. Peripheral neighbourhoods had their urban spaces (new squares, parks) improved and facilities with metropolitan importance were

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<sup>5</sup> HALL, Peter. 1996. *Ciudades de mañana: historia del urbanismo en el siglo XX*. Barcelona, ed. del Serbal.

<sup>6</sup> ZUKIN, Sharon. 1995. *The Culture of the cities*. Massachussets, Blacwell Publishers.

<sup>7</sup> Old centres revitalization affected many Latin-American cities since the 1980s. In the Brazilian context, the case of Olinda's revitalization constitutes an important reference to the preservation process, especially because of the importance given to popular participation. Governmental funding and a policy orientated to benefit the existing householders lead the program to preserve also the immaterial heritage of the historic area. In Rio de Janeiro, two urban policies served as paradigms for urban improvement: *Corredor Cultural* in 1984, affecting the City Centre, and *Rio Cidade*, affecting many peripheral and central neighbourhoods, during the 1990s. In the old centre the idea was to bring life back to the area occupied mainly by offices and a marginal population, due to the zone abandon as new neighbourhoods in the south zone were developed. In the peripheral neighbourhoods, the idea was to reconstitute their self-confidence by means of an improved urban space and in some cases, rediscover their identities as historic areas. More recently many urban areas became the focus of redevelopment in Rio de Janeiro: *Praça XV* and the old port area. In that context, *Enseada da Gamboa* redevelopment was one of the interesting projects that intended to transform the old maritime-railway terminal into a new neighbourhood. Due to political changes, the implementation of this project was delayed. In 2002, a strategic plan for the old port was developed affecting a larger area of redevelopment. In São Paulo, the redevelopment of *Água Branca* is an operation that intended to transform many railway areas and vacant plots in favour of new residential facilities, offices and institutional areas. But few actions were executed. Referring specific to Brazilian redevelopment actions, most projects still remain as intentions to be developed.

introduced, such as commercial centres, transportation nodes or new public equipments.

In both American and European realities urban redevelopment is the next stage of this process of transformation through urban fragments.

Nuño Portas<sup>8</sup> points out that redevelopment projects are part of a third generation of policies. If the first generation (post-war) reject the existing, the second and the third ones are characterized by the opportunities of the inner cities. Nevertheless, the second generation responds to specific demands (those derived from the degradation of historical centres and the need of improved urban open areas), while the third generation is mostly sustained by large scale events (Olympic games, Expos, Cultural capitals) or international funding (funding from European Community or BIRD projects). In terms of dimension, the third generation affect large amounts of land and are a response to the new financial and marketing conditions, political consents and private partners.

Urban redevelopment actions treated in this article correspond to the aforementioned third urban project generation supported by the concept of sustainability.

### 1.3. Sustainability crowning the argument in favour of redevelopment

Originally the sustainability concept was associated to the use of natural resources (measured by physic-biotic parameters), economical development (measured in monetary terms) and social equity (measured by social parameters)<sup>9</sup>. The questions around urban sustainability were finally discussed at the 1996 Habitat II Istanbul Conference. Urban sustainability was formerly related to the concerns of lowering and/or recycling waste outputs, reducing air and water pollution, lowering resource inputs. A shift in the discussion comes from the relation between sustainable development and urban form.

As ecological issues originally structured the concept, many ecological metaphors were used to guide how cities should be developed. The analogies between nature and urban spaces led to the argument that compact urban models are more sustainable than the dispersal ones. Following the analogies, in disperse ecosystems, it is observed less community diversity, few functional niches, waste of nutrients, etc, while compact ecosystems present high structural and species/community diversity, high level of nutrient recycling, reduced gross (photosynthetic) activity and higher energetic efficiency<sup>10</sup>. So, compact urban models are also more efficient than sprawled territories.

In addition to that, cities should reach the size of efficiency, which is less than a megalopolis and more than a small village. Newman and Kenworthy's conclusion that the expenses with the transportation of energy used per capita, the waste treatment and the recycling systems generally decline as city size increases is an example of the argument towards not only the compact model but also to the reinforcement of the existing urban areas.

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<sup>8</sup> PORTAS, Nuno. 1998. "*Interpretazioni del progetto urbano*", en *Urbanística*, n° 110, giugno 1998, 51-60.

<sup>9</sup> The Sustainability concept was formerly presented at the Stockholm Conference (1972) and then developed by the 1986 *Brundtland* Report. The latest 1992 Rio de Janeiro Earth Summit focused mainly ecological issues.

<sup>10</sup> NEWMAN, P. & KENWORTHY, J. 1999. Sustainability and cities. Washignton, Island Press. (p. 15-16).

In many countries that meant different planning policy direction: from guidelines that usually supported suburbs to the strengthening of inner areas of the metropolis.

One singular example is Netherlands Fourth and Fifth National Report that changed the national planning rules from the post-war decentralized model towards a “concentred” policy: the VINEX projects provide new housing near urban centres or by transforming central areas.

According to this argument, urban redevelopment has been seen as the policy by excellence to reuse the existing city. The reuse of large amounts of area especially in the first industrial peripheries would respond to the demands for housing, avoiding urban growth.

## 2. Redeveloped areas as a distinctive space

### 2.1. Comparing costs: urban expansion vs. urban redevelopment

The cost of urban expansion generally includes the passage from rural to urban land, meaning sometimes the expropriation of productive land. One of the main issues in urban expansion is to bring infrastructures to this ex-rural area: sewer, water and lighting networks, as well as accesses and public transportation. As physical planning is inclined to point out the potential future conversion of these territories, real state market also tends to attribute a different land value to the rural areas where urban expansion will be possible. But land value expectation is usually related to peripheral activities. Besides, in only few cases, soil needs to be either corrected/improved or cleaned through difficult procedures.

In urban transformation, on the other hand, the process affects already urbanized areas, what could suppose low infrastructural costs. This happens with building replacement or rehabilitation, when an edifice is demolished and replaced by a new one. But when the urban transformation affects a large amount of land, such as in redevelopment, other constraints appear. The urban redevelopment of the last 25 years focusing mainly 19<sup>th</sup> century industrial areas has encompassed requirements that approach or surpass urban expansion costs. The passage from industrial sites to spaces with opposed activities, such as residential, offices or leisure, requires many morphological changes.

Industrial areas are usually organized in a system of large plots with irregular shapes and low densities. The urban grid usually reaches the entrance of the large plot in a way that there is no internal grid, because the inner streets just give access to the large buildings.

As they were implemented during the 19<sup>th</sup> Century, few sanitary facilities exist and few infrastructures networks are observed inside the plots. The 20<sup>th</sup> Century sewer urban network, implemented after the construction of the industrial precinct, tends to be distributed around it. So, urban transformation of industrial sites also requires the same infrastructures needed in projects of urban expansion.

Furthermore, the pre-existing 19<sup>th</sup> century industries have been contaminating the soil. Then, the land clearance includes not only the elimination of industrial buildings and facilities, but also the decontamination of the land. This adds a supplementary cost to the operation, which is not found in urban expansion.

If, on one hand, the real state market expectation concerning urban expansion is related to activities less profitable, in urban redevelopment the expectation is to create

central areas, with central activities. The plots to be redeveloped have to be acquired by the entrepreneur (either public or private). With this future expectation, land price for expropriation tends to rise. As land price increases, the urban redevelopment program is defined according to the expected profits.

The main hypothesis explored in this study attempts to the fact that in urban expansion and urban sprawl, the program and householder's needs define the spatial requirements, because the cost of the operation allows flexible a householder profile, while, in redevelopment, transformation procedures lead the program to establish the profile of the householder.

Urban expansion responds to high class householder's demands. Those projects are mainly developed as exclusive private areas with restrict access, security requirements, known as the condominium typology. For the public administration, these are low cost operations, since public investments concern only peripheral infrastructural works. The investments inside the area are made by entrepreneurs.

But urban expansion also responds to low class householders demands when plot division (pd) and housing construction (hd) are adopted previous to infrastructural works (iw). The sequence (pd? hd? iw), although undesirable, is frequently adopted in many demagogic urban policies, when the concern is to respond to popular demands of new housing with low public cost, in a short period of time. When housing construction precedes plot division or infrastructural works - the sequence (hd? pd? iw) - it corresponds to the usual order in which slums emerge in urban centres.

In urban redevelopment, infrastructural works never appear to be the final urbanization step. Since the plots have to be reacquired, the soil needs decontamination, and buildings or railway infrastructures must be demolish or suppressed to create urban land, the costs with redevelopment begin before any profit is achieved. Developments follow the sequence (iw? pd? hd), what means that this initial cost tends to be transferred to the agents that will finally buy the apartment, shop or office: the householder or the owner.

Therefore, the program as well as the householder/ owner profile is usually defined according to this cost transference.

## 2.2. Revising three redevelopment operations: Barcelona, Paris and São Paulo

### **Barcelona's Poblenou** (fig.1 &2)

Since the 1992s Olympic Games publicised Barcelona's strategies of urban improvements, this case became a paradigmatic experience, especially regarding the Olympic areas. The Olympic Village, in the industrial neighbourhood of *Poblenou*, was the result of the redevelopment of 157 industrial areas and the railway line that historically segregated the *Poblenou* neighbourhood from the rest of Central Barcelona. The Olympic Village affected 46,7 ha and created 1814 new houses. In the same neighbourhood, other two large urban operations are under development since 1985 adding to the Olympic Village the redevelopment of more than 100 ha.

The second operation known as Maritime Waterfront redevelopment affected the area cleaned by means of the elimination of the coast railway line and the closure of many industrial precincts. It aimed to create 421,000m<sup>2</sup> of new housing in two main projects: the five blocks of *Marbella* and *Diagonal Mar* area. *Diagonal Mar* was built in a system of towers in order to create a large park inside the 52 ha redeveloped, allowing also enough land for a new shopping centre. *Marbella* is a group of 5 urban blocks facing

Barcelona's waterfront redeveloped following many rules of the *Cerdà's* grid: buildings aligned with urban block perimeters, inner courtyards inside the block, maximum number of floors compatible to the existing areas.

The third operation was motivated by the extension of the *Diagonal Avenue* (the Diagonal infrastructural element that cuts the orthogonal *Cerdà* grid of the *Ensanche*). The opening of this section of the Avenue in *Poblenou* affected one of the former 19<sup>th</sup> century urban fabrics of Barcelona's outskirt villages. The 63,7 ha redevelopment is transforming the area previously occupied by small industrial plants (almost 500) and many residences (732 old houses). It is creating new 5,700 housing, a new urban square, equipments, hotels and shops. This operation has not been finished yet.

#### **Paris's Quartier de la Gare** (fig.3 &4)

To preserve Paris central areas, the main urban transformations in the city during the 20<sup>th</sup> century affected its peripheral belt. Renewal was conceived for most of the early peripheral zones from the 19<sup>th</sup> century, ancient "*faubourgs*" (villages) placed outside the Parisian walls. However, the renewal concept started changing in the late 1970s, as the urban instrument of *ZACs* (*Zone d'Aménagement Concerté*) began to be applied. It focused firstly the redevelopment of small urban fragments and then larger areas such those of *La Villette* quarter, *Bercy* or the latest *Seine Rive Gauche*, the redevelopment project analysed in this article.

The first studies for *Seine Rive Gauche* began with the candidature of Paris for the 1992 Olympic Games, finally won by Barcelona. After many years of discussion, the redevelopment affects almost 130 ha and includes singular activities such as the National Library, a new University Pole, a business pole (Avenue of France and *Austerlitz* quarter), but also smaller cultural activities and a housing program of 500,000m<sup>2</sup>. Urban land for the operation is obtained through the creation of a new urban level 8m above the existing railway (to *Austerlitz* Station) and the elimination of the freight terminal of *Tolbiac* and the inactivation of the *Grands Moulins* and other industrial precincts. The operation is still in process.

#### **São Paulo's Bairro Novo** (fig.4 &5)

*Bairro Novo* is the name given to the 120ha's area in the city of São Paulo object of the national competition of urban projects in June 2004. The territory is placed between the neighbourhoods of *Água Branca* and *Barra Funda*, near to a future intermodal station. The competition organized by the Brazilian Institute of Architects and São Paulo City Council aimed to define a Masterplan for what should be the profile of a 21<sup>th</sup> century neighbourhood.

The program had to be detailed by the competitors, but a certain number of houses, commercial and institutional facilities as well as public open areas are defined by the organization. Around 5,500 new houses and 115,000 m<sup>2</sup> of services were expected. The Masterplan should deal with some constraints such as the railway line at street level configuring the southern limit of the area, the *Tietê* River and the tendency of inundation of its adjacent area during rain season. As well, some large properties should remain in the area.

### 2.3. The environment of redevelopment: the early peripheries

The early urban peripheries were developed in the second stage of the industrialization process of the second half of the 19<sup>th</sup> Century, when cities faced their first growth bang. Cities that had gone through an industrialization process during the 19<sup>th</sup> century tend to present in those territories common characteristics since the growth process followed similar rules.

The early peripheries grew as a continuation of the urban centre, because they took advantage of the existing roads as growth lines. Industrial sites and railways played an important role during the construction of these territories. They functioned initially as points of attraction for new metropolitan activities but in a second moment they started to function as a barrier to the link of different urban fabrics composing this early periphery. These aforementioned urban obstacles resisted in those territories, although the city continued to expand.

This explains why cities in different contexts, that nowadays show divergent economic development, can present similar territories which could be submitted to analogous urban operations. New York, Milan, Paris, Amsterdam, Barcelona, but also Buenos Aires, Rio de Janeiro, São Paulo or Bogotá can be object of similar urban operations, redeveloping their early peripheries. Of course, the more unequal the context, the more stressed will be their characteristics, especially those related to living conditions in the area, as well as to the abandon of spaces which could ease the raise of irregular occupation of the area.

Although in the first half of the 20<sup>th</sup> Century early peripheries had been object of several changes, they were usually associated to improvement of living conditions (hygienist programs). The common sense about bad living conditions of early peripheries comes from the rejection of high density urban model during the first half of 20<sup>th</sup> century and the mixing of inappropriate activities, such as housing and industry. The small house size, the super populated buildings and the poverty of the inhabitants of these neighbourhoods led to the development of public policies towards urban renovation.

As cities have been growing since then, those territories no longer figure an external periphery. However, they still maintain the morphology and the characteristics of a peripheral space, because the main urban obstacles remained, as well as, their peripheral uses.

The description of the territories of the abovementioned projects (*Poblenou*, *Quartier de la Gare* and *Bairro Novo*) helps to understand the common characteristics between so different contexts, picturing the environment of urban redevelopment.

### ***Barcelona's Poblenou*<sup>11</sup>**

Poblenou urban characteristics were historically associated to marginal uses existing in this peripheral neighbourhood: the first modern cemetery of Barcelona, the railway, industries, slums, hospital for the infected, women's prison, etc.

The railway is the cause why Poblenou was traditionally seen as a distant neighbourhood. Although in terms of physical distance this area is close to the Old Walled Town, the main obstacles (dangerous level passages crossing the railway, the existence of industries with high level of air pollution, absence of paved areas connecting it to Barcelona) created a psychological distance.

Before redevelopment started (1985), Poblenou's morphology could have been described by 8 different areas: the Northern area, with family houses and small buildings; *Taulat*, comprising family houses of no more than 3 floors around the

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<sup>11</sup> Information obtained by the author. See MARTINS, A. de Aragão. 2004. Recolonización urbana: nuevos fragmentos urbanos en la transformación de las primeras periferias. Barcelona, Universitat Politècnica de Catalunya/Departament d'Urbanisme. Tesis Doctoral.

metallurgical industry of *Can Girona*; the section of the port route, mainly industrial and with buildings of no more than 5 floors; *Pequím* slum, in the beach, formed by Chinese families emigrated from the Philippines to Spain; *França-Xica*, which was composed by workman houses around a big industrial area; *Somorrostro* area(1879-1966) near the ancient Hospital for the infected, and the group of houses behind the Cemetery(1898-1999).

Since 1970 multifamily housing developments based on the post-war tower model were built in Poblenou's outskirts. Two of them must be highlighted: *Sudoest del Besòs*, a low middle class area and the conflicting *La Mina*, occupied by gipsies and poor immigrants from southern Spain. Both areas are suffering a large process of rehabilitation while a social inclusion program is under development.

### **Paris's Quartier de la Gare<sup>12</sup>**

*Quartier de la Gare* in Paris, in the 13<sup>th</sup> *Arrondissement*, was formed along the route to Fontainebleau, the route to Wales and the route to Lyon. There, many elements of out wall areas were placed: *La Salpêtrière* Hospital, the slaughterhouse, many plants such as the Gas Usine, the Refinery *Say*, the *Grands Moulins*, the goods railway terminal of *Tolbiac* and finally the railway terminal of *Austerlitz*. *Quartier de la Gare* is also known as the Chinese neighbourhood, because since 1965 the neighbourhood has received a large ex-colony migration flow. In fact not only Asian, but also African immigrants have occupied the new housing areas constructed in the tower model as part of many renewal operations (from the 1967 *Plan Directeur d'Urbanisme*). The area of *Olympiades*, a set of towers over a commercial shopping centre, or the areas of *Nationale*, *Baudricourt* or *Gandon Masséna* are examples of this phenomenon. Those towers ensembles represent another current theme in urban transformation: the rehabilitation of this group of buildings and the densification of those areas.

*Quartier de la Gare* is characterized by small workshops and factories, in high density, with working-class houses or small buildings. In the *Gobelins*, the area touching the 5<sup>th</sup> *Arrondissement*, buildings follow the *haussmanian* model with regular urban façade and well defined urban blocks. Near to *Italie* Avenue and *Boulevard Masséna* the landscape is mainly formed by a set of high tower. *Avenue de Choisy* and *Avenue d'Ivry* are commercial streets full of Asian shops and restaurants, creating a special atmosphere for the area, very different from the sector around *Jeanne d'Arc* square where the old *faubourg* ambience with some old buildings remind the origin of the neighbourhood.

### **São Paulo's Bairro Novo<sup>13</sup>**

In São Paulo's "Bairro Novo Masterplan" area, the urban scenario reproduces some of the elements found in 1980s Barcelona's Poblenou: the railway, the waterfront, here represented by the *Tietê* River, the slum adjacent to the perimeter of intervention; a popular housing development (The *Singapura* housing ensemble); industrial sites. The

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<sup>12</sup> See MARTINS, A. de Aragão. 2004, *op. cit.*

<sup>13</sup>Referential bibliography:

(1) IAB-SP, Prefeitura de São Paulo. 2004. Concurso Bairro-Novo: termo de referência (material do Concurso entregue aos participantes). São Paulo, mimeo.

(2) Prefeitura do Município de São Paulo-EMURB. Operação urbana Água Branca: Documento técnico/Lei 11.774 de 18/05/1995.

(3) MARTINS, A. (Coord.) 2004. Proposta para o Concurso Nacional Bairro Novo: trabalho apresentado à organização do Concurso.

area of intervention presents other several obstacles represented by corridors of mobility: *Marginal Tietê* is a system of express roads along *Tietê* River, where major east-west traffic flows take place. The outlets along *Marginal Tietê* remind the metropolitan character any neighbourhood may assume in a megalopolis like São Paulo. *Marquês de São Vicente* Avenue is a bus corridor that cuts the neighbourhood in two parts, north and south. The area is occupied by outlets, and small workshops. *Nicolas Boer* Avenue is connected to a viaduct that establishes the flows between northern and southern neighbourhoods of São Paulo, crossing transversally the *Tietê* River.

In developing countries, the characteristics of the early peripheries ? marginal activities, segregation and peripheral condition ? stress inequality. Areas for high standard class appear side by side with existing marginal housing in the limits of the intervention. They are represented by private and fenced sport clubs (a training club and a middle class leisure club), where access is controlled and limited to members. Also, a group of luxury office towers constructed in the limits contrasts with the ordinary furniture shops along one of the existing avenues.

In this urban scenario, other expectations over land transformation are added to usual pressures. In these scenarios, not only transformation procedures lead the program to establish the household profile, but also suggest the functions that the area can play in the metropolitan context. The presence of corridors of mobility leads to the interest of specific activities, such as outlets or shopping centres searching for “the view from the road”. The existence of luxury offices nearby could also influence the redevelopment program towards an area with offices. The large plots occupied both by sport and social clubs which could not be removed nor be eliminated from the program configure islands of exclusiveness inside the area of intervention. The vicinity of a slum and a low class area leads the north-western portion of the perimeter of intervention to a low class profile zone.

### ***Points in common***

Old housing areas placed close to industrial sites, infrastructures configuring obstacles in the territory, large plots besides small parcels in high densities, absence of urban grid, lack of sanitarian infrastructure, and groups of towers for housing or offices. These are common characteristics among such different contexts like Barcelona, Paris or São Paulo. The environment of redevelopment pictures the peripheral condition of those areas and the marginal image they present when compared to other central areas

Redevelopment tends to introduce different urban standards in the early peripheries. The operations usually correct many traces because they affect the deep urban structure of the territory, proposing a new grid, new accesses and connections, new open spaces, or activities with metropolitan importance, innovative buildings. Since redevelopment acts by urban fragments, the improvement of redeveloped areas contrasts with the situation of the rest of the neighbourhood.

### **2.4. Housing prices contrasting redeveloped areas with the existing neighbourhood**

The European experience in urban redevelopment shows those projects tend to be organized as distinctive urban spaces. As a strategy to attract the householder, experimental spatial models are applied to these areas, gathering housing and other singular uses such as cultural facilities, transportation nodes, shopping centres, urban parks, etc.

The literature about urban redevelopment or urban rehabilitation in the last 25 years tends to present gentrification as one of the results of the price raise process that the

whole neighbourhood suffers after the redevelopment of an urban fragment. This large social, economic and ethnological change is caused both by the replacement of the population and the expulsion of former neighbourhood inhabitants. In fact, this happens as a consequence of the distinctive character of the redeveloped area, which contrasts with the peripheral condition of the neighbourhood where redevelopment takes place.

The research aimed to confirm the phenomenon of price raise by comparing house prices between redeveloped and pre-existing properties. Poblenou's Barcelona and Paris's Quartier de la Gare were the territories chosen for data comparison because, there, redevelopment projects were either finished or under course of action. The idea is to be able to reach some conclusions that could be then applicable to São Paulo's example, still under planning. Since territories identified as early peripheries show many elements related to the peripheral condition and marginality, similarities appear between developed countries and unequal scenarios. Thus, price behaviour in European cases could play the role of a thermometer for other environments.

Methodologically, the research privileges qualitative information. By making use of qualitative data, it was defined the matching of many characteristics of apartments among records, both in developed and non-developed areas. The difference in prices between the studied areas can be also explained by the urban scenario in which the apartment is placed, variable that is also stressed in the method of analysis.

In Barcelona's Poblenou, prices collected for the pre-existing properties took into consideration mainly the areas around *Poblenou Rambla* (an important pedestrian axis improved in the 1980s: a valued area) and also non-redeveloped areas near the redevelopment of the 5 Waterfront blocks of *Marbella*. This area is suffering the valuation effects of redevelopment of the 5 urban blocks by means of a non-planned process. Nevertheless, among the prices collected, there are not only several properties from the beginning of the 20th century partially rehabilitated, but also many ground floor flats, and small flats from the multifamily housing area (representing devaluated properties).

Among the redeveloped areas researched, Olympic Village, as the oldest redevelopment, represents the case in which impacts were farther absorbed by the neighbourhood, while *Diagonal Mar* and *Marbella* blocks represent examples where the contrast with surrounding areas is still very intense.

Furthermore, *Diagonal Mar* corresponds to the example of the most distinctive profile applied to a redevelopment project. The apartments offer luxury elements to attract householders: equipped kitchen, central heating and air conditioning, internet connections, shielded doors, satellite antenna, video surveillance, pneumatic garbage collection, private parking. In addition to that, the urban morphology adopted also stresses a different urban concept: the condominium inside the compact city.

The method compared prices of apartments with the same area measured in square meters among redeveloped and pre-existing areas. The diversity in prices observed can be credited more to differences among housing features than to differences among urban scenarios since the houses compared were located in the same neighbourhood, sharing similar levels of general accessibility and public facilities (tables 1 and 2).

Ventilation and natural lighting standards used in the redeveloped areas, added to the appeal of the beach proximity or the availability of inner block open spaces might have been the cause of the difference in prices. Those redeveloped areas show the same accessibility of the existing properties. In the properties near *Poblenou Rambla*, the metro is even closer to the non-redeveloped areas than to the redeveloped ones. For

private transportation the areas present the same accessibility, but in terms of services and facilities the existing areas present more dynamism than the redeveloped ones.

Table 1 - Area	Type	m2	Price
Poblenou existing property	Flat	73 m <sup>2</sup>	250,000 €
Diagonal Mar redevelopment	Flat	73 m <sup>2</sup>	378,500 €

Sources:<http://www.habitaclia.com>,<http://www.diagonalmar.com>, [www.buscainmobiliarias.com](http://www.buscainmobiliarias.com)  
(data collected in November 2004)

Table 2 - Area	Type	m2	Price
Poblenou existing property	Flat	105 m <sup>2</sup>	327,500 €
Marbella Waterfront redevelopment	Flat	100m <sup>2</sup>	489,824 €

Sources:<http://www.habitaclia.com>,<http://www.diagonalmar.com>, [www.buscainmobiliarias.com](http://www.buscainmobiliarias.com)  
(data collected in November 2004)

Among the redeveloped areas, it is also observed a difference in price. *Diagonal Mar* is an especially over valued area among other redevelopment projects, because of the exclusiveness of this development: the organization of buildings in private condominiums with swimming-pool, paddle tennis court, social area for parties, playground area, private gardens; the presence of the park; and the 17-22 floor tower organization allowing sights from the Barcelona waterfront and from other parts of the city offer a singular housing product in the context of Barcelona. On the other hand, both in *Marbella* and in the Diagonal Avenue redevelopment, the urban block parameters, as well as the use distribution (commercial ground floor + higher housing floors), are very similar to the urban form found in other Barcelona neighbourhoods, especially the *Ensanche* (tables 3 and 4).

Table 3 - Area	Type	m2	Price
Poblenou existing property	Loft	110 m <sup>2</sup>	354,597 €
Diagonal Avenue redevelopment	Flat	117 m <sup>2</sup>	462,780 €
Marbella Waterfront redevelopment	Penthouse	115 m <sup>2</sup>	580,577 €
Diagonal Mar redevelopment	Duplex	120 m <sup>2</sup>	727,225 €

Sources:<http://www.habitaclia.com>,<http://www.diagonalmar.com>, [www.buscainmobiliarias.com](http://www.buscainmobiliarias.com)  
(data collected in November 2004)

Table 4 - Area	Type	m2	Price
Marbella Waterfront redevelopment	Penthouse	220 m <sup>2</sup>	812,000 €
Olympic Village	Penthouse	200 m <sup>2</sup>	950,000 €
Diagonal Mar redevelopment	Penthouse	160 m <sup>2</sup>	1,000,000 €

Sources:<http://www.habitaclia.com>,<http://www.diagonalmar.com>, [www.buscainmobiliarias.com](http://www.buscainmobiliarias.com)  
(data collected in November 2004)

A surprising conclusion came from the price comparison between the Olympic Village area and the pre-existing properties of Poblenou. Prices are similar despite the higher accessibility of the Olympic Village compared to other Poblenou areas or the proximity to many beaches or the leisure and commercial activities found in the near Olympic Port (tables 5 and 6).

Table 5 - Area	Type	m2	Price
Poblenou existing property	Flat	50 m <sup>2</sup>	173,000 €
Olympic Village	Studio	45 m <sup>2</sup>	171,300 €

Sources:<http://www.habitaclia.com>,<http://www.diagonalmar.com>, [www.buscainmobiliarias.com](http://www.buscainmobiliarias.com)  
(data collected in November 2004)

Table 6 - Area	Type	m2	Price
Poblenou existing property	Flat	80 m <sup>2</sup>	283,976 €
Olympic Village	Flat	80 m <sup>2</sup>	282,476 €
Sources: <a href="http://www.habitaclia.com">http://www.habitaclia.com</a> , <a href="http://www.diagonalmar.com">http://www.diagonalmar.com</a> , <a href="http://www.buscainmobiliarias.com">www.buscainmobiliarias.com</a> (data collected in November 2004)			

In other paradigmatic experiences, such as Seine Rive Gauche in Paris, the morpho-typological definition is also a key-element for difference in price.

Table 7 - Area	Type	m2	Price
Redeveloped Tolbiac quarter	Flat -4rooms(new construction)	88 m <sup>2</sup>	710,000 €
Existing Tolbiac Quarter	Flat-4rooms(new construction)	83 m <sup>2</sup>	440,000 €
Nationale Quarter (area redeveloped in the 1980s)	Flat-4rooms(new construction)	85 m <sup>2</sup>	430,000 €
Chevaleret Metro	Flat-4rooms(new construction)	85 m <sup>2</sup>	420,000 €
Sources: <a href="http://paris.lesiteimmobilier.com">http://paris.lesiteimmobilier.com</a> , <a href="http://www.trouver-un-logement-neuf.com">http://www.trouver-un-logement-neuf.com</a> , <a href="http://www.abonim.fr">http://www.abonim.fr</a> , <a href="http://www.bouygues-immobilier.com">http://www.bouygues-immobilier.com</a> (data collected in November 2004)			

Areas recently redeveloped such as the quarter around National Library (*Tolbiac Est* and *Tolbiac Ouest*) show a great difference in price when compared to adjacent areas, for instance, the area around *Chevaleret* metro. The same difference happens between recent redeveloped areas and places that experienced an older process of transformation, such as the 1970s renewed areas of *Olympiades*, *ZAC Baudricourt*, *ZAC Gandon Masséna* and *ZAC Nationale*. In those ancient renewed housing ensembles prices are similar to those of the 19<sup>th</sup> century urban fabrics, like the houses around *Place Jeanne d'Arc* (table 7).

Also, despite the difference in urban situation among renewed areas, prices tend to approach due to morpho-typological patterns. Although accessibility is not the same in areas close to a metro station or to one important axis (*Italie Avenue* or *Choisy Avenue*), the fact that both *Olympiades* and *ZAC Gandon Masséna* had been built following similar architectural rules (towers and similar apartment inner distribution) influence correlated price parameters (table 8).

Table 8 - Area	Type	m2	Price
Redeveloped Tolbiac quarter	Flat -3rooms	67 m <sup>2</sup>	530,000 €
Around Porte de Choisy (Near to the renewal area of the 1970s ZAC Gandon Masséna)	Flat-3rooms	66 m <sup>2</sup>	275,000 €
Avenue de Choisy (Near to the renewal area of the 1970s ZAC Baudricourt)	Flat-3rooms	68 m <sup>2</sup>	280,000 €
Sources: <a href="http://paris.lesiteimmobilier.com">http://paris.lesiteimmobilier.com</a> , <a href="http://www.trouver-un-logement-neuf.com">http://www.trouver-un-logement-neuf.com</a> , <a href="http://www.abonim.fr">http://www.abonim.fr</a> , <a href="http://www.bouygues-immobilier.com">http://www.bouygues-immobilier.com</a> (data collected in November 2004)			

The period in which certain architecture is built-up is an important element for price grouping because inner and external characteristics of the development are comparable.

*Tolbiac* area (around National library), on one hand, offers a distinctive space: nor the 19<sup>th</sup> century urban fabric (because it applies an open urban block model with collective

gardens and squares) neither the post-war tower model, in which the open spaces are out of function and dominium is not recognizable. On the other hand, *Tolbiac* redevelopment reminds the traditional Parisian urban atmosphere, as shops are allowed at ground floor and there is a mix of functions in each urban block.

The distinctive characteristics lead to a new product to be offered to the real state market, not comparable to the renewal areas or to the 19<sup>th</sup> century ones.

Table 9 - Area	Type	m2	Price
Redeveloped Tolbiac quarter	Flat -5rooms	102.28 m2	930,000 €
Olympiades renewal from the 1970s	Flat -5rooms	105m2	420,000 €
Sources: <a href="http://paris.lesiteimmobilier.com">http://paris.lesiteimmobilier.com</a> , <a href="http://www.trouver-un-logement-neuf.com">http://www.trouver-un-logement-neuf.com</a> , <a href="http://www.abonim.fr">http://www.abonim.fr</a> , <a href="http://www.bouygues-immobilier.com">http://www.bouygues-immobilier.com</a> (data collected in November 2004)			

Table 10 - Area	Type	m2	Price
Redeveloped ZAC Château des Rentiers	Flat -2rooms	52 m <sup>2</sup>	255,000 €
Around Place Jeanne d'Arc (area with redevelopments from the 1980s)	Flat-2rooms	50 m <sup>2</sup>	230,000 €
Nationale Quarter	Flat-2rooms	52 m <sup>2</sup>	280,000 €
Sources: <a href="http://paris.lesiteimmobilier.com">http://paris.lesiteimmobilier.com</a> , <a href="http://www.trouver-un-logement-neuf.com">http://www.trouver-un-logement-neuf.com</a> , <a href="http://www.abonim.fr">http://www.abonim.fr</a> , <a href="http://www.bouygues-immobilier.com">http://www.bouygues-immobilier.com</a> (data collected in November 2004)			

What can be concluded from these data?

First of all, transformation of urban fragments, especially by means of redevelopment, tends to spread their effects over a larger area. That happens because the contrast between the early periphery environment and the redeveloped area is very intense at the very first moment after the end of the construction. The contrast emerges because most redevelopment projects tend to supply innovative urban elements (in terms of new activities or building typologies) and new urban spaces (open areas, new avenues, etc).

The effect is larger in many environments because redevelopment is usually the second stage in urban transformation. As commented before, open spaces improvement, façades and building rehabilitation were applied in many inner areas of compact cities during the 1980s as an alternative to reduce quality of living differences between among neighbourhoods. Barcelona and Paris are examples of that policy. In those contexts, the consequence was the reduction of difference in price among neighbourhoods. As redevelopment is then applied to urban fragments, the strategy previously restricted to the improvement of urban façades is then extended to the possibility of rebuilding: for example, other smaller industrial sites occupying only half block could be acquired by an entrepreneur and rebuilt according to adjacent redevelopment patterns. In Barcelona's Poblenou the morpho-typological patterns used in the Olympic Village or *Marbella* redevelopment can be now recognized in many punctual rebuilt areas.

Moreover, the data showed that when redeveloped areas begin to age (with the natural devaluation of the house characteristics through the years, the gap between prices of old and new areas tend to reduce.

The example of the Olympic Village is paradigmatic. Many buildings already need a rehabilitation of their façades. Besides, Olympic Village is no longer a novelty in the Poblenou context. The initial contrast with the surrounding areas led a television program to picture the impact of the Olympic Village on the neighbourhood with the following scene: by opening the front door of one of the new buildings the new

waterfront scenario could be seen, while the back door showed the old landscape of industries, chimneys and abandoned buildings. But this threshold no longer exists: the “backdoor” of the redevelopment has been turned into new building ensembles. The industrial enclaves that still remain are the backyards of other more recent redevelopment operations, such as the one along the Diagonal Avenue.

The example of areas renewed in the 1970s in the Parisian experience also confirms that tendency. Prices between the renewed areas and those pre-existing properties of the 19<sup>th</sup> century became similar because the neighbourhood context has already embodied the renewed areas.

Furthermore, the most distinct characteristic of the redevelopment is that the difference in price is an element stronger than the accessibility to the area when compared to the existing adjacent spaces. Although the accessibility provided by public transport to the Olympic Village is much higher than the one available to Diagonal Mar, this has not been a significant element to define prices. As the profile of redevelopment focus a high standard class, private mobility tends to be the option of most householders. Therefore, the accessibility by public transport decreases in importance. In Quartier de la Gare, public transportation (especially metro station) is distributed mainly in the perimeter of the neighbourhood (*Blvd. Vicent Auriol, Avenue d'Italie and Blv. Masséna*). The proximity of *Tolbiac* redevelopment to the metro station in *Blvd. Vicent Auriol*, showing a place with high accessibility, does not allow the same conclusions observed in Poblenu's context regarding private transportation choices. However, *Masséna* redevelopment, still under construction and not as accessible as other parts of Quartier de la Gare, will be able to confirm the preference for attributing more value to redevelopment characteristics than to accessibility by public transportation.

#### 2.5. Affordable housing as islands of price control or ghettos in redeveloped scenarios

If the distinctive characteristics of redevelopment lead to a householder profile that searches for luxury properties, how may affordable housing be included in those urban operations?

In European examples or in unequal contexts, affordable housing is suggested to units that the real state market wouldn't value too much: in rectangular urban blocks, corner apartments where adjoining windows belong to different householders; apartments over commercial areas, such as supermarkets; ground floor apartments, where direct contact with the public space may reduce safety.

Besides some features which are not considered valuable by the market, the size of the apartment is a significant element for the definition of housing affordability. The larger the apartment, the higher the floor, the greater will be the chance of this unit to be considered as free market. On the contrary, the smaller the apartment, the lower the floor, it will tend to be considered as a social or affordable housing unit. Small size apartments are used as a variable to reinforce the householder profile that could benefit from this condition. Young or elder people, single parent families, couples have been the focus of several European policies of affordable housing. More than incomes, the social profile is decisive to design the policy.

In Paris Rive Gauche redevelopment, the operation defines almost 50% of social rental housing managed by the City council (among the total of 4,000 new houses, 2,000 will be considered as affordable in a rental system). Specific profile, such as students will benefit from the program with 1000 new houses assigned (600 social houses and 400 free market). The social housing program defines different segments of affordability,

representing different housing prices. The “studio” typology of about 45 or 50m<sup>2</sup> is offered as social housing.

In Barcelona’s Poblenou the situation is very different in numbers, because since 1992, about 14,000 free market houses have been created and only a little percentage has been designed to affordable housing. In Poblenou, affordable housing is provided among the smaller apartments: those at ground floor of about 50m<sup>2</sup>, which as compensation have a 20m<sup>2</sup> terrace, facing the inner court. Although income defined the potential applicant for affordable housing, those who could benefit from the program had to win a lottery. Conscientious of the expulsion that the original population of the neighbourhood suffered, and to avoid the reproduction of the same parameters in a new program under planning (the *Program 22 @*), organized groups demand that new housing programs assure 50% of social housing area assigned to inhabitants of the neighbourhood.

In unequal contexts, the typologies considered as affordable housing follow the same logics found in European examples: size constraints, less valued urban location or permissiveness with public space. However, the householder profile for social housing is extremely different. In more equal contexts, affordable housing is designed to householders whose incomes could afford at least part of the rents, while in developing countries the theme of social housing emerges considering the poorest segments of society. Homelessness or misery leads Governments to find “easier” solutions like parcelling out public land in the city’s outskirts, distributing free plots in areas with bad accessibility and lacking infrastructure.

To assure affordable housing in the redevelopment, the pre-program presented in the competition for São Paulo’s *Bairro Novo* Masterplan defined the commitment of 600 housing units as social housing. In a context of more than 5,500 potential housing units, that meant no more than 10% of social housing, which could be analyzed as a lack of social conscience. However, in fact, it means that proposing affordable housing seems to be unfeasible is such an operation.

To be viable, as indirectly pointed out in the Competition rules, affordable housing should be organized in buildings with no more than 5 floors. So, more than talking about affordable units, that solution means affordable buildings, probably developed with governmental funding, as an island of price control, illusory for the rules of housing market. Those buildings will probably be constructed with stairs instead of lifts and will probably be raised with low quality materials. As a result, one of those social buildings could be easily identifiable as a ghetto in the distinctive atmosphere of redevelopment.

But the solution also brings another contradiction, related to the small size of apartments. Inside the social building, apartments must have the maximum area of 45m<sup>2</sup>. This size constrains the family profile. How can it be expected that a family of 4 or 5 people be able to live in 45m<sup>2</sup> apartments? Probably, only single people, couples or single parent families will apply to those apartments. Indirectly, the selection for affordable housing is not considering income but social profile, reproducing the European way to assure affordable housing, but in contexts where this segment is not the centre of the housing problem.

Population in a marginal situation (neither those living in the slum near the area nor the low-class householders living in the close *Singapura* building ensemble) would benefit from the program. The demands for affordable housing from the poorest segments will continue to be answered by means of urban expansion, creating new peripheral housing areas in the edge of the city.

In that sense, the intention of the housing program established in the Brazilian competition doesn't target on the social segments in the centre of the housing problem in unequal contexts. It actually offers only cheaper apartments inside the redeveloped area.

### **3. Redevelopment restrictions**

Redevelopment in the early peripheries, transforming industrial sites, railway areas or ports, introduces housing facilities in spaces previously occupied by activities with less urbanity. That represents an improvement in the process of integration of many of these former industrial neighbourhoods, always attached to an image of marginality, peripheral condition and segregation. This positive change that the redevelopment has been providing to many urban areas over the last 25 years is undeniable.

However, householders living in the existing housing areas in those affected neighbourhoods also suffer negative consequences, due to the urban scenario contrast between the industrial environment and the distinctive redeveloped urban space.

Just after redevelopment, prices in redeveloped areas tend to be higher than in the adjacent ones, reinforcing the contrast. In the second stage of the process, improvements tend to appear in the areas surrounding the redevelopment and prices tend to rise in the whole neighbourhood. Gentrification tends to appear, and a movement in population is noticed. As time passes, the redeveloped areas begin to age and devalue. New redevelopment projects can take place in other zones of the neighbourhood and a new change in population may happen: as prices tend to approach between older and newer areas, wealthy social segments may choose to move to new redeveloped areas; people in the non-redeveloped spaces can move to the oldest redeveloped areas and, finally, new population flows from other neighbourhoods can move to the non-redeveloped areas. What is observed is that successive actions of redevelopment along time provoke a filtering process.

Filtering is probably another positive effect of redevelopment, when the metropolitan context is observed. If gentrification is observed inside the neighbourhood in the first moment after redevelopment, other householder movements from other less valuable neighbourhoods may occur as a consequence.

Filtering observed in these areas evidences that redevelopment is more likely an alternative to sprawling rather than to urban expansion, due to the householder profile.

Of course the product offered through redevelopment is very different from the house+garden offered in disperse housing areas which characterizes the sprawl. But the distinctive product offered by redevelopment may attract similar householder profiles.

The examples presented usually employ multi-stored buildings rather than family houses. However, the morphology and the typology employed for the urban block follow the wish of more green and light also existing in the house+garden typology. Balconies with waterfront views, penthouses with private open spaces, or private terraces connected to collective inner courts, with garden and swimming-pool materialize many ideal living concepts for high standard classes: spaces where children could play safely, families could be entertained during the weekend, friends could meet, in such a way that contact with nature is possible. Other examples not detailed in this work, such as Amsterdam's *Oostelijk Havengebied* area (the eastern

dockland redevelopment) offer in the peninsulas of *Borneo* and *Sporenburg* the house+garden typology, through row-house morphology that reminds the traditional Amsterdam urban fabric. The proximity to central Amsterdam and the accessibility improved in the redeveloped neighbourhoods are elements to be taken into consideration by householders when choosing to live in disperse housing areas or in more central redeveloped areas.

Another question refers to filtering process. It assures that in the future the existing stock of houses in a neighbourhood with redeveloped areas may become affordable to householders coming from other more peripheral areas. Therefore, filtering should be taken into consideration by public planners. Public policies must be designed to force this cycle, because filtering depends on the emerging of new distinctive areas that might attract high standard householders in order that they would be able to free housing units for new householders.

Redevelopment restrictions to become a substitutive alternative to city growth concern mainly the affordable housing theme. As affordable housing in redevelopment is only possible if the government absorbs the lost concerning market prices, social housing tends to be a fake construction in the context. As seen before, other alternatives to introduce affordable housing includes offering housing units with so bad characteristics that they would be of no interest to the market.

To turn affordable housing into a “real” offer regarding redevelopment, entrepreneurs must also be involved in the offer and not only public agencies. A compensation policy can be adopted: if a certain number of affordable housing units are provided in each building, then the authorized plot built-up area or the maximum granted number of floors could be revised in other to compensate the inevitable “lost”. This private-public partnership is a way to avoid affordable housing to become islands of price control inside redevelopments. As well it avoids the ghetto formula, when a single building is identifiable as social housing contrasting with the adjoining ones. But that solution does not solve the problem faced in unequal contexts, where even with systems of compensation for the entrepreneur, the final price of the housing unit could not be affordable to the poorest segments of society.

In truth, as observed through the data analysed, instead of answering to the demands for affordable housing, the promotion usually makes available cheaper housing units for a social segment close to the one that looks for free market units.

#### **4. Final remarks**

This study contributed to the analysis of the difficulties to promote urban redevelopment with a view to replacing urban expansion, regarding the social aim of generating affordable housing for poor segments of society, especially in developing countries.

The costs of transforming industrial plots increase land value and oblige urban projects to follow programs designed to a special householder profile. As a result, redevelopment is not often a substitutive alternative for all housing demands.

Among redevelopment restrictions, two negative elements have to be considered when designing this sort of development: on one hand, gentrification is almost inevitable and affordable housing for poor people is quite difficult to be successful. Gentrification could be in the long term compensated by movement of householders from other neighbourhoods to old redeveloped areas (filtering). Affordable house will probably

serve the needs of special social segments (the new family profile such as single parents, couples, young or elder people).

However, redevelopment has to be considered as an efficient urban policy due to the positive effects it brings to the neighbourhood by introducing housing in former industrial sites. Also, the potential of those areas by offering an alternative to the product required by householders who could also decide in favour of sprawled housing areas units is an argument to endorse redevelopment.

Redevelopment should not be argued as a magic alternative that would stop with urban sprawl or the emerging of new peripheral areas. This most certainly is an interesting alternative to reuse most areas of the inner city and to solve a housing demand for high standard social segments. In that sense, other policies have to be designed to solve the problem of affordable housing, by means sustainable models, in the inevitable peripheral areas.

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