
Building built: the design of urban space

Rehabilitation project of the industrial area of Alcantara

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ABSTRACT. This paper focuses on the theme Building Built as the possibility of a reflection on the contemporary city and its rehabilitation.

The study of the industrial area of Alcantara aims at defining strategies to design the restructuration of the public space. The architecture and the public space (adjacent and complementary to it) are witnesses of the industrial city. They have the ability to offer us a canonical city's public space. They can lead to the rebuilding of places in a way that we still recognize the meaning of 'public' and 'collective' in them and the morphological spaces of the traditional city.

The rehabilitation project presented here intends to enhance the experience of public space and create a set of places that will last in time and continue the collective memory of the city and its inhabitants.

KEYWORDS. Urban Order. Rehabilitation. Urban Design. Industrial area of Alcantara.

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This paper presentation arises from the Building Built theme to address issues that pertain to the theme of public space and urban design. The study focuses on the need to restructure the public space in order to promote the rehabilitation of neglected areas of Lisbon, so the city can reclaim its identity and a better relationship with its inhabitants.

First, we look at the evolution and transformation of the city over time, in an attempt to understand what features and elements should be focused on in the search for a new urban order. The recent urban development in Lisbon wrought a change in its characteristics and in the way we use public space today. The city has expanded chaotically, as a result of careless processes and urban transformations devoid of any principles of logic or structure. The depreciation of the older parts of town and the inability to find other uses for them beyond what they were originally meant for, led to rampant construction, giving rise to new buildings, often out of context and completely disconnected from the surrounding urban fabric. This disqualification calls for the production of meaningful architecture, one that considers the city's organization and urban integration, and that effectively contributes to the improvement and enhancement of public urban space.

In searching for strategies for restoration and valuing urban planning in the composition of the order of the city, we question how principles of urban regeneration, based on the existing built, may enable this process. We look for different approaches to the issue of urban growth, as well as for ways to define the issues prevalent in the city's rehabilitation process. We find the question of public space to be fundamental in the city's organization, and thus we aim to understand how the establishment of criteria based on morphology and urban design can enhance its appreciation, and to prove to increase the quality of life of its inhabitants.

In the interstitial spaces of some of the older parts of the city we can sense the ability to recover values of the canonical city that can significantly contribute to its rehabilitation.

Finally, we present an urban design and architecture project, which is an attempt to apply some of the principles advocated here. This project is located in Alcantara, a neighbourhood that, while falling within the limits of what is thought of as the urban centre of Lisbon, is today forgotten by time, disconnected from the rest of the city. Once it stopped being home to heavy industry, this area bore the consequences of the violent actions that it has successively been a subject of, be it through the road infrastructures that were built over time, the vacant buildings, mostly industrial, in which we now recognize a high architectural value, and which remind us of the urgent need for restructuring/rehabilitating this area of the city, in order to recover its value and identity.

Alcantara is currently the subject of an ambitious urban plan aimed at restructuring the area and the creation of a new centrality, expanding Lisbon's historic centre of along the riverfront.

The primary objective of the project designed for the industrial zone is restructuring the public space, seeing as the architecture and the spaces on site – evidence of the industrial city – can be transformed and might even return some aspects of the

canonical city, building places where we recognize a sense of public and collective morphological spaces of the traditional city.

I. The need to establish a new order

Faced with the question of urban discontinuity, we seek to establish an order so as to control the city's growing process and to define and strategies to promote its urban growth.

The central areas of cities are suffering, in varying degrees, the consequences of urban growth, of the mode of urbanization, of the intensification of land use and of the various livelihoods of different sectors of society. Urban centres have had great difficulty in facing up to the demands of the community, meeting them with various levels of inadequacy and degradation. The consolidation of the urban centre is a key principle in both the structuring and the growth of the city. However, the identification of *primary elements*¹ (ROSSI, 1977) and the definition of a system of public spaces (both on a city-wide scale and on a territorial level) are of enormous importance in the construction of the collective memory and the organization of urban space.

Reflections on the growth of the city must then focus on the processes that have shaped the changes in its structure over time. The industrial revolution marked the beginning of the change, causing the rural flight and the ensuing urban expansion of cities. In the second half of the twentieth century, growth has intensified, spreading out the 'limits' of the city, giving rise to peripheries based on concepts of zoning and distribution of activities and services by sector, going against the natural order of growth of cities up until then.

The city has then changed from a structured system, understood as a unified entity, as an organized and continuous element, into a set of 'things', and "*it is not possible to impose a coherent system of relations between the spaces organized and [the city] thus the city is more like a sum of spaces than it is a structured whole in which functions blend and merge disorder rules*"² (PORTAS, 1964, p. 99). The dispersed territory calls for the need to link instead of expanding, improving the networks already in existence.

It is urgent to rethink the organization of urban space, in the face of the deformed growth of cities, moved only by material needs. It is also urgent to reconcile the various subsystems and to generate a structure "*of places and things*" (PORTAS, 1964) which is itself an expression of the community that inhabits it.

The system of public spaces, both public and private, is at the source of the dynamics and movement of people who inhabit the city. As social spaces, they bear high symbolic value. This system is a crucial element in structuring and redesigning new areas of urban expansion, establishing continuity between the new urban complexes/neighbourhoods and the spatial structure of the consolidated city. It is a structural element of the city, which contributes decisively to its balance and to its full fruition, making the transition between the various centres of the city. The system of public spaces underscores the importance of developing the city as a whole and proves to be vital in establishing conventions that contribute to the construction of the collective memory of the city's inhabitants.

II. Urban design

Urban design focuses on the relationship between the pedestrian and the elements that make up the urban composition, weaving a reflection that seeks to understand what possible ways there are of structuring and organizing the city in search of a new order.

Urban morphology and new conceptions of space, which arose in the post-industrial city, establish the criteria and assumptions that are to be taken into account in the design of public space.

The shaping forms of space, created through logical criteria of structural design, behave as interconnected units, and this formal development seeks a redefinition of public space and determines what we call the urban form.

But the *"space separating the forms shapes the void"*³ (TÁVORA, 1962, p. 12), and its importance in the organization of urban space exists on a city-wide scale in the design of public space, where the building is not merely an object that redefines the design of the city, but also part of an urban system.

The opposition between built form and space leads to thinking about criteria of composition and spatial perception. It becomes crucial to establish relationships of spatial composition, departing from a vision of architecture as self-resolving, when we consider that the building is not only a subject that redefines the design of the city, but a part of the urban system, rebuilding its relations within itself. The search for formalization or urban composition results in the 'urban design' of a space.

*"The urban form should be a solution to the set of problems which urban planning aims to organize and control. This is the materialization in space of the answer to a specific context"*⁴ (LAMAS, 2007, p. 48). The design of the city must take its context into account through architecture. We believe morphological elements to be similar throughout the history of urbanism, and that the differences arise in how these elements are positioned, organized and linked together to form the urban space. In this context, we view 'form' as an answer to a spatial problem and thus as the product of an action and a solution to a given problem.

The idea of urban design sets itself as a strategy to draw the city in anticipation of permanent elements, adding to it over time based on rules set by the elements themselves. These forms of permanence are the result of values pertaining to the collective identity and call for a continuity with the traditional city (PORTAS, 1989).

Attention to the existing city leads us to take such consolidated concepts as a strategy for building as 'street' or 'square', and to look at the types of new construction based on the parts already in existence.

III. Urban project in Alcantara

The district of Alcantara is located in the south of Lisbon, within what is considered to be the urban centre of the city. The neighbourhood sits on a valley, opening to the south through land conquered to the Tagus by successive landfills where, in the late nineteenth century, some major industrial units were installed.

The industrial area of Alcantara, in particular, coincides with the areas of landfill, which led to the industrial occupation of the nineteenth century. The large industrial complexes built in different eras make up diverse and heterogeneous sets.

The urban design developed for this area aims to provide media of reconversion that face up to the advanced state of urban and landscape decay in which the district of Alcantara lies. It seeks to reinforce the idea that the requalification of public space, as well as the valuing of the landscape, the new public transport system and the strengthening of a 'new' centrality are closely connected and can promote a significant increase in the quality of life of those who reside and those who use this area, as well as that of all the inhabitants of Lisbon.

The accesses, enabled by new public transport availability, transform the area into an important interface that plays a key role in the connections between Alcantara and the city, boosting its centrality, and thus stimulating new ways for people to settle, contributing to its rejuvenation. The installation of new public facilities for urban and local use also contributes to more active urban dynamics. Enabling experience and promoting the use of public space through the integration of a new public facility is the premise for the architectural project, and constitutes its role in the restructuring of the industrial area of Alcantara and Lx Factory (Fig.1).

This *pocket* of post-industrial city can be seen as a *primary element*, taking into account its permanence in time and the public and collective character of the equipment in it. We find that the rehabilitation of this area of the city may result in the creation of a new centrality, given the symbolic and spatial value (territorial position) that is recognized in the area under study, and thus can contribute to building a global polycentric city.

This territory is presented as a physical surplus of the industrial city, which recently has been appropriated through the repurposing of the old existing plants for a set of professional and cultural services, in a complex named Lx Factory. This is a *pocket* of the city of Lisbon, testimony of the heavy industry, which has been appropriated today and transformed into a creative cluster of sorts.

The interstitial spaces that remain of what was once an industrial centre, the streets, meeting places and the accesses we can still decipher today, are part of



Fig. 1 Lx Factory

routes and routines of other times. And these physical remains, the urban facts we find here today, can refer us to an idea of the traditional city that will allow us to retrieve canonical values in the construction of a piece of a city. The rehabilitation of the industrial zone of Alcantara intends to enable the experience of public space and, along with the collective equipment set forth, to create a set of spaces that will remain in time, building the collective memory of the city and its inhabitants.

The boundaries of the industrial zone of Alcantara are diluted in overpasses and monumental infrastructures. Thus, the project seeks to define these limits as a way to structure and integrate the industrial zone into the city routes.

Therefore, in order to conform these limits, integrating the neighbourhood into the current route of the city, a portico was thought up so as to sew the various spaces around the proposed urban project, from the train station of *Alcantara Terra* through the urban park leading to Lx Factory, going around it and leaving its extension open to other important points of the city (as the building of the Lisbon Metropolitan Orchestra, or a link to the archway that opens into FIL, designed by Keil do Amaral).

The neighbouring regions draw the boundaries. It's a kind of sewing that aims at basting the different areas and services, thereby contributing to the expansion of the city centre, and the creation of a new centrality. The limits can be more than mere obstacles *"if we allow some motor and visual qualities to be a part of them"*⁵(LYNCH, 1960). This portico, as well as being a route that takes advantage of the various urban spaces proposed, is meant as a sheltered path, an alternative

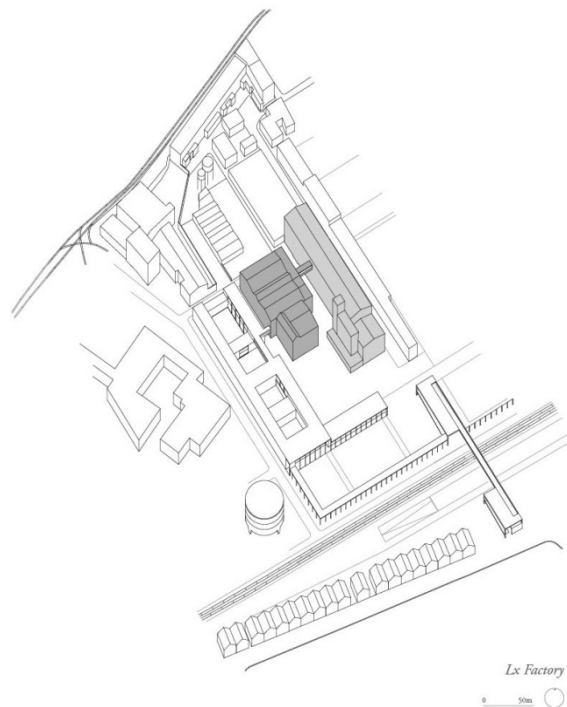


Fig. 2 Axonometric view.

to the riverfront route.

We propose the creation of a new equipment for collective use within the Lx Factory complex. The new equipment means to be an important contribution to the rehabilitation of the area, both by the way it is set and relates to the surrounding areas, designing and formatting the public space, and the new set of activities it offers, complementing the *Lx Factory* complex.

This project means to stand for the renewal and rehabilitation of the built. Thus, along with the proposed new equipment, the architectural plan comprises the recovery of one of the existing buildings: the old *Mirandela* printing office (Fig.2).

The public building projected integrates and reinforces the system of collective spaces. It is important to understand how the deployment of new equipment will enhance and stimulate the experiences of public space.

The building is designed taking into account the characteristics of the place where it stands and its relation with the adjacent spaces. On one side, a public square is formed, on the other, there is a street that is faced with some leftover industrial buildings and the pillars of the *25 de Abril* bridge. Thus, the endeavour is to create a gradation of privacy that makes the transition between public and private areas (Fig.3).

The square, drawn from a void between the new building and the ones already in existence sets up a large public space, assuming the role of 'heart' of *Lx Factory*, led by the *Mirandela* factory building. Thus, just as the *Fiação de Tecidos Lisbonense* factory relates to the *Rodrigues de Faria* street, the new equipment and the *Mirandela* factory turn to the square, establishing a more public relation with it. This square is bordered to the south by a set of trees, which refer to the agricultural activities and the old farms that once characterized this place. The orchard also has the purpose of making the transition between Avenue of India and the square, preserving the privacy of the square and protecting it from the sunlight. Although it is headed by the existing building, which is to be used in activities that are public and accessible by the general public, the square is flanked by the proposed new building, which relates to it in different ways along its eastern façade.

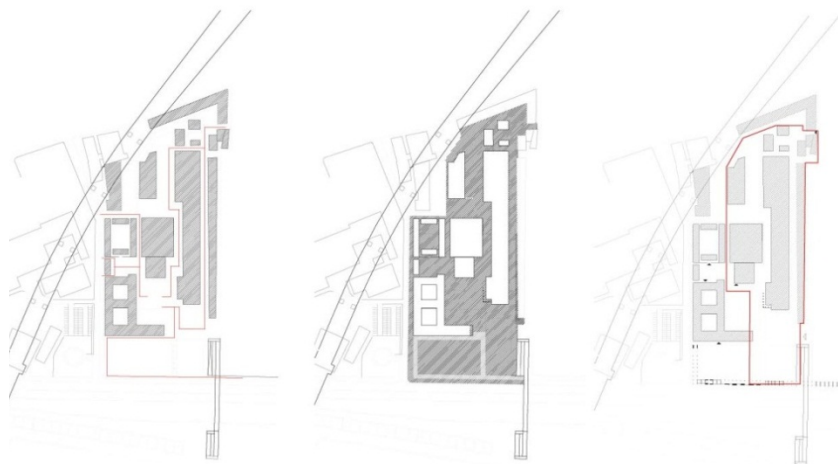


Fig. 3 Diagrams of public space

The proposed building is torn by courtyards that make up the public spaces. These courtyards relate to the history of this place and refer, to some extent, to the concept of community implicit in worker villages.

Both by their sizable dimension and the patrimonial value acknowledged to them because of the role they played in the lives of the inhabitants of the Alcantara neighbourhood, *patios* (courtyards) and *vilas* (clusters of houses) play a crucial role in preserving the collective memory of the city. They are living testimonies documenting social events at the level of people's connection to urban space. They fall into a category in which the street is a semi-private space, although already urbanized, facing the public way. The space is built as model and volumetric cargo, with a degree of preference for the intimate, in a human scale.

Patios and *vilas* are of great importance in that they can be used to investigate issues of public/private or individual/collective very explicitly, as it is around courtyards that all the circulation and distribution of services is made. The courtyards are also used as a strategy for lighting, allowing natural light to flow into all spaces (Fig.4).

These strategies for repurposing public space seek to strengthen the relationship between the city and its inhabitants. The industrial area of Alcantara has the qualifying potential to establish continuity with the disconnected areas within which it stands today. The interstitial spaces of the area, reminders of the industrial city, have the potential to be transformed and to return to us some aspects of the canonical city, in the sense that we recognize physical and 'spatial' characteristics in them which establish very interesting ways to enhance and design the public space.

We tried to work upon the public space by creating a square and courtyards that make up the collective places of the city and define the new interstitial spaces of the industrial zone. The gradation of privacy that is generated in the routes made the square into another place to discover after going through *Lx Factory's* main street, the central public place that exists in the midst of other less public places (Fig.5).

The role of the collective building in structuring and organizing urban space is stressed, and this one generates deeply contrasting relations between public/private and individual/collective. We tried to make inner courtyards of the building isolated, while maintaining a relationship with the outside through the circulation areas, and the continuity given by a 'green roof', the orchard trees entering the courtyard. On the other hand, the south entrance of the building shapes the square, closing a meeting place in itself, where all paths converge.

The urban and architectural project conducted emphasizes the need to redesign the public space in order to strengthen the system of public spaces and to make it part

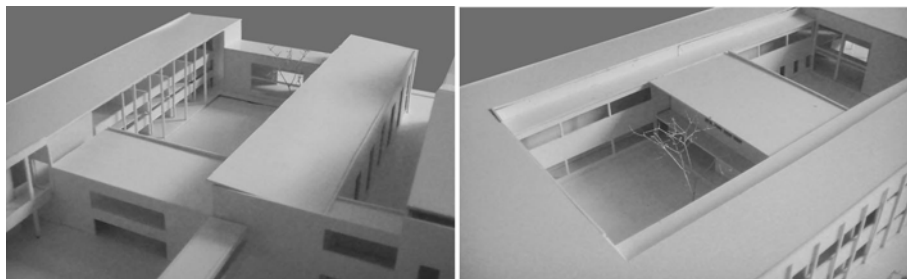


Fig.4 Patios of the public building

of the consolidated city. The system of public spaces is a priority in the organization and rehabilitation of the old areas of the city, establishing continuity between the whole of the urban fabric and ensuring a global spatial structure.

What we mean to conclude is that, indeed, the renewal of public space will create new conditions for the civic ownership of urban areas, contributing to the development of new forms of urban experience, richer and more involved.

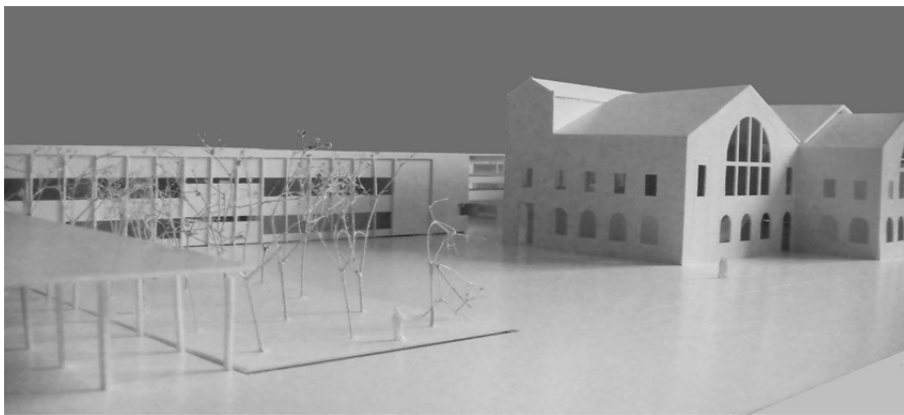


Fig.5 View of the principal square

Notes

¹ In *A Architettura da cidade*, Rossi refers to the primary elements as urban facts that generate the shape of a city.

²Author's translation.

³Author's translation.

⁴Author's translation.

⁵Author's translation.

Legends

Fig.1 Lx Factory. Author's photography.

Fig.2 Axonometric view. Author's drawing.

Fig.3 Diagrams of public space. Author's drawings.

Fig.4 Patios of the public building. Model and photography by the author.

Fig.5 View of the principal square. Model and photography by the author.

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Biography

Mariana Gama is an architect who recently graduated from the Technical University of Lisbon with an Integrated Master's degree of Architecture. Her final dissertation focused on urban regeneration and urban design. As part of her master's program, she studied one year abroad at the University of Buenos Aires where she developed several projects under the urban design theme.

She is currently working at an Architecture and Urban Planning studio in Shanghai, China.