

BUILDINGS AND URBAN FORM: INVESTIGATING BUILDINGS WITH A POSITIVE URBAN TRANSFORMATION DIMENSION

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ABSTRACT

The construction of a building can, based on its project strategy, transform and improve the liveability and use patterns of the city fabric. Certain buildings are remarkable due to their relationship with urban space, leading to articulation spaces - patios, passageways, pathways - shaped by the building and adapted to the urban fabric. These buildings establish continuity with the surrounding area allowing for the construction of places in the city. However, the study of the city based on morphology and the interpretation of buildings according to typology has hindered the understanding of spaces generated by situations that occur in the frontier between architecture and urban design. The objective of this article is to identify and interpret project strategies that improve the qualities of urban space. The intention is to describe the spaces generated by the construction of the buildings that modify the form of the city introducing urban qualities in a pre-existing fabric. The qualities of the "path" and of the spaces of "permanence" generated by these interventions will be characterised - meaning the spatial situations generated by the buildings that create movement and spatial situations that define stable spaces. Five buildings located in Lisbon will be the case studies.

INTRODUCTION

Within a context where most Europeans live in cities - 72 % of all Europeans, according to United Nations (UNFPA)'s 2008 data -, architecture is referred to as an important factor towards the so-called "urban renaissance". The European Council supported this idea via the 2007 Leipzig Charter on Sustainable European Cities, which was reinforced in the following year in the document 2008/C 319/05, by establishing that a relation between the quality of buildings and the characterisation of urban landscape is a sustainability premise. The construction of a building can, based on its project strategy, transform and improve the layout of the city.

Certain buildings are recognized due to their relationship with urban space, leading to articulation spaces - patios, passageways, pathways - shaped by the building and adapted to the urban fabric. These buildings establish continuity with the surrounding area allowing for the construction of *places* in the city. However, the study of the city based on morphology and the interpretation of buildings according to typology has hindered the understanding of spaces generated by situations that occur in the frontier between architecture and urban design. The objective of this article is to identify and interpret project strategies that improve the qualities of urban space.

Aldo Rossi (1966), who endeavoured to develop a typological understanding of architecture based on urban morphology; Rowe & Koetter (1978), who enhanced the role of the building in modern cities, were the pioneers of the study of this issue. More recently, Lang (2005) considered the typologies of urban situations and pointed out "the products of architecture and the nature of urban design" (2005:114) by studying buildings that incorporate elements that are characteristic of city layouts and transform them into urban design. However, these situations do not specifically contemplate the spaces created when comparing buildings and urban fabric. Joan Busquets and Felipe Corea (2006) sought to establish a "taxonomy of the ways of designing the city and of the new urban territories" (2006:9). They developed the idea of "piecemeal aggregation" based on "urban project intermediate scale" situations, similar to the French concept *pièce urbaine*. This classification however deals with interventions to buildings and does not deal with the development of spaces generated by the buildings. Matos, Ramos

and Gonçalves (2008) have extended the research on the different urban situations that can generate "passageways" in Portuguese cities. Such spaces generated in the encounter between building and urban layout have been rarely touched in the literature.

The objective of this article is to identify and interpret project strategies that improve the qualities of urban space. The intention is to describe the spaces generated by the construction of the building that modify the form of the city introducing urban qualities in a pre-existing fabric. The qualities of the "path" and of the spaces of "permanence" generated by these interventions will be characterised - meaning the spatial situations generated by the buildings that create movement and spatial situations that define stable spaces. Five buildings located in Lisbon will be the case studies.

1 - CHURCH OF THE SACRED HEART OF JESUS

The Igreja do Sagrado Coração de Jesus (Church of the Sacred Heart of Jesus) was designed by a team of architects led by Nuno Teotónio Pereira and Nuno Portas (Fig.1). The project was selected amongst 12 proposals in a tender promoted by the "Comissão Fabriqueira da Igreja do SSC de Jesus" in 1962. The tender proposal would later feature as the preliminary draft, presented at the Lisbon Town Council and would be the basis of the project developed between 1963 and 1968. The building was constructed between 1967 and 1976. In addition to the church area, this building combines other elements for community-related activities, such as the parish centre. The project is located in a plot between Rua de Santa Marta (street at upper level) and Rua Camilo Castelo Branco (street at lower level), in the heart of Lisbon Fig.1 [B]). This part of the city was urbanized between the end of the 19th century and the beginning of the 20th century within the scope of the Ressano Garcia plans for the area of "Avenida da Liberdade" and "Avenidas Novas". The street at the lower level, however, belongs to a much earlier period; for centuries, it was part of a road leading from the countryside to the heart of the city of Lisbon.

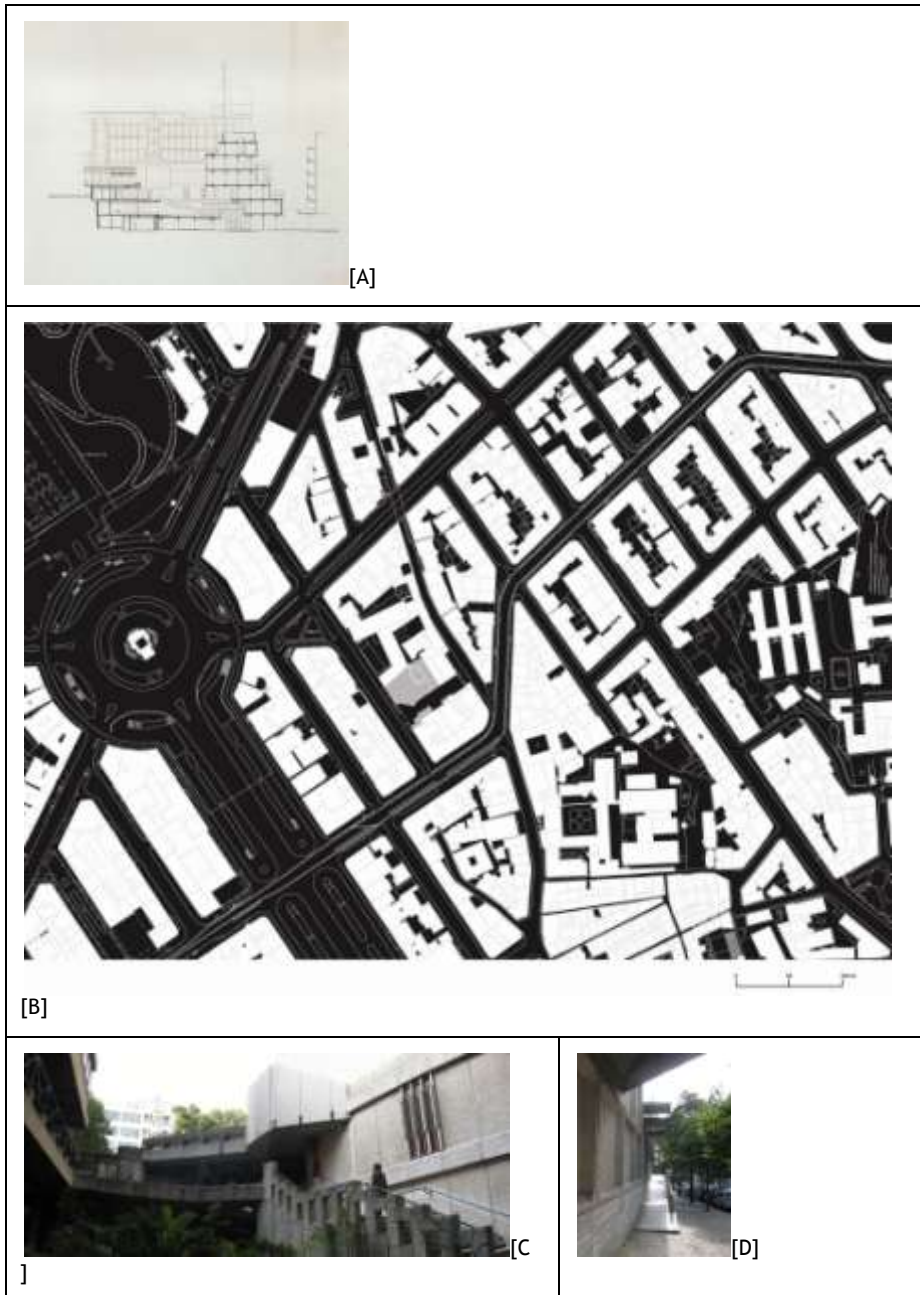


Figure 1 Church of the Sacred Heart of Jesus;[A] section between Camilo Castelo Branco St and Santa Marta St (Source: Tostões, 2004);[B] location plan: public space(black), case-study (grey); [C] view of “urban” patio; [D]Ramp, Camilo Castelo Branco St

Urban strategy

The idea of constructing a building of strong urban dimension was part of the base programme and featured as one of the assessment criteria of the tender. The wish to reveal visually to the city the internal part of the block relates to the religious attribute of the programme, of linking the building to the community; the project integrated that very intention. The construction features a central empty space allowing for a pedestrian crossing between the two streets, which are on different levels (Fig.1 [A]). This central space is an urban patio with a sequence of staircases that define a path between the street on the top level and the street on the bottom level and vice-versa (Fig.1 [D]). The project reorganises the urban aspects of the block by adding permanence space and passageway space, thus affording the city a new pathway. This action contributes toward an improved public space allowing for the use of the inside of the plot as part of the urban fabric. The procedure implied a previous agreement with the promoter of the Guiné building

located at the end of the plot at the bottom level. The design of the Guiné building featured a passageway in tunnel as initial premise. This would allow the connection between the central patio of the church and Santa Marta Street.

Path: emptiness in cascade

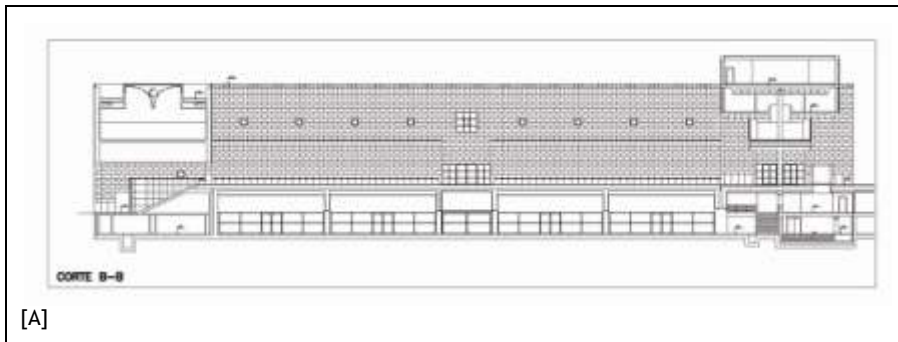
On the upper street, the construction features prominent details that break the continuity of the façade plan. This street has a slope and allows access to the interior of the block via two entrances: ramp and stairs. The ramp, a scenographic feature, is a prominent element of the façade, which counterbalances the movement of those going down the street and thus inviting to enter the enclosure (Fig.1[C]). The entrance via the stairs located on the other end of the street is more formal. From the churchyard, you can already see the patio and the access to the bottom level. From the entrance, the path might not be quite clear but as you walk through the space you are led to the interior and then to the exit. From the street on the bottom level, the Guiné building features a passageway forming a tunnel. The existence of an urban path is not that clear from the bottom street.

Permanence: an interior space

The central patio (currently filled with flowerpots and plants, leaving us with the feeling that it does not want to be inhabited) and the transition areas of the path define the permanence spaces. This is a public space with characteristics of an interior space due to the size and topography of the surrounding area.

2 - BELÉM CULTURAL CENTRE

The Belém Cultural Centre (BCC) was designed by Vittorio Gregotti and Atelier Risco, at the time led by Manuel Salgado (Fig.2). The project was selected in a public tender amongst 57 projects in a first phase and amongst 6 in a second phase. The competition was promoted by the Instituto Português do Património Cultural in 1989. Its objective was to build a structure with the capacity to host the first Portuguese Presidency of the European Union in 1992, which would then function as a cultural centre.



[A]

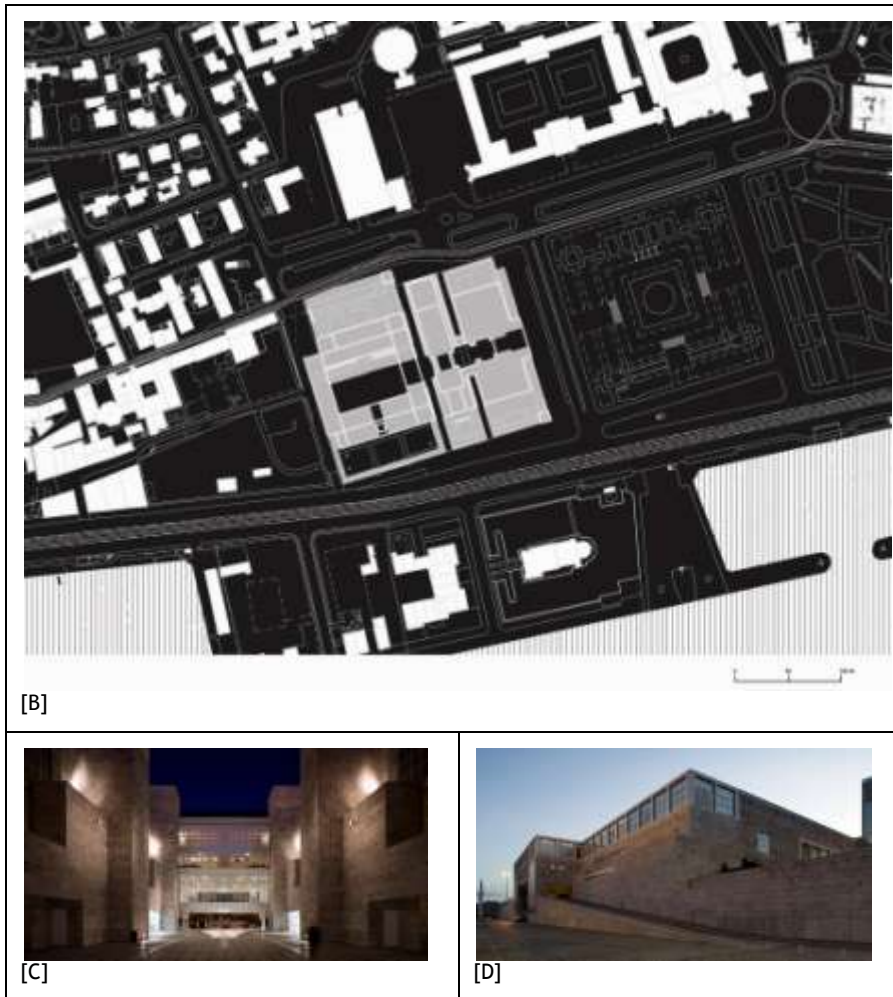


Figure 2: Belém Cultural Centre; [A] section of the “patio-square”; [B] location plan: public space (black), case-study (grey); [C] view of “patio-square” (Risco, 2010); [D] view of the main façade (Risco, 2010)

Its initial programme featured five modules of which only three were built: the Meetings and Conference Centre, the Performing Arts Centre and the Exhibition Centre. The building is located in the Belém area, on the riverfront to the west of the centre of Lisbon, between Bartolomeu Dias Street and Avenue da Índia, in front of Praça do Império (Império Square) (Fig.2[B]).

This area is historically linked to the Discoveries and has suffered many changes. In 1940, it was reorganized for the Portuguese World Exhibition. Belém has remarkable buildings, rich in history and architecture, such as the Palace and the Tower of Belém, the Museum of Archaeology, the Planetarium, the Monument to the Discoveries, the Monastery and the Church of Jerónimos, all situated in the surroundings of the BCC.

Urban Strategy

Due to its relation with the Jerónimos’ Monastery, the building has been aligned, to (re)define the Império Square. The central part of the building is empty, defining a sequence of “patios-square”, alternating with articulation areas between the three structures. The different centres are separated by transversal “streets” that divide the building. The latter streets link the interior of the building and the streets parallel to the river, similarly to the narrow streets in the historical areas of Lisbon. The central empty area extends the urban fabric to the interior of the building, creating a public space inside the building (Fig.2[C]).

Path: the “patios-squares” versus the “narrow streets”

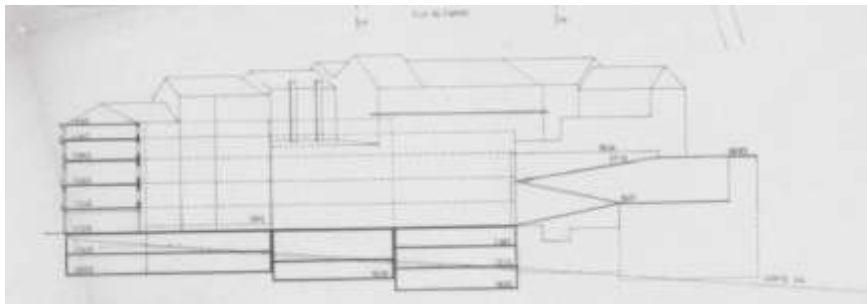
A passageway under the first centre leads us to a patio from where one can view the river (Índia Avenue) and Bartolomeu de Gusmão Street through a transversal opening corresponding to a descent to the car park access. This space ends off with a covered area, under the second centre, that accesses the auditoriums and which simultaneously leads us to the next area on the upper level via two symmetric flights of stairs. A transition area featuring a narrow transversal crossing can be covered from north to south. Then there is a patio-square larger than the previous one that ends with a balcony facing west. From this square one can also access the Jardim das Oliveiras, on the southern part of the building, or the exhibition centre.

Permanence space: the interior square

At the end of the spatial sequence, the patio-square features as the extremity of the whole eastern-western pathway (Fig.2[A]). Although it is not located in the heart of the three centres, but on one of the extremities (west), it can be considered as a central area due to its dimension and proportion regarding other spaces.

3 - BLOCO B - CHIADO

The project for Bloco B block is included in the “Detailed plan for the recovery of the destroyed area of Chiado”, developed by architect Álvaro Siza Vieira since 1989, following the fire that devastated the Chiado area in the very heart of Lisbon in August 1988 (Fig.3). The Bloco B project includes the recovery of eight buildings that comprise the block and the redefinition of the interior space as a public space.



[A]



[B]

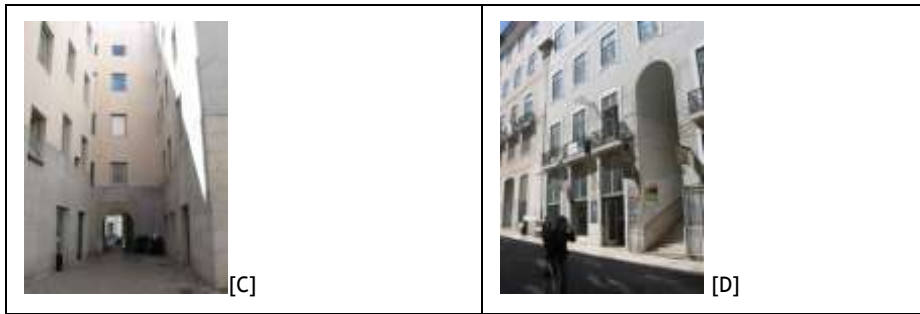


Figure 3: Bloco B; [A] section between Garrett street and access to Carmo (Castanheira and Santos, 1988); [B] location plan: public space (black), case-study (grey); [C] view of the "corridor"; [D] view façade Carmo St

The works have still not been concluded but completion is foreseen according to the initial project, namely for the access between the interior of the block and the upper street level. The block is located in the Chiado area in Lisbon, between the Carmo, Garrett and Sacramento Streets.

Urban strategy

The procedure allows for the creation of a public space meant for articulation between three distinct levels by building passageways with access to the interior of the block from Carmo Street and Garrett Street. The project foresees a connection ramp up to the upper level by the old Carmo Convent, (not completed) (Fig.3[A]). The reconstruction of the block's buildings allowed for a more in-depth design of the buildings quite different to what previously existed, thus gaining space inside the block. In fact, this corresponds to an earlier situation, that of the reconstruction by the Marquis de Pombal of the city devastated in 1755. This strategy allows opening up a new public space that can be an intermediate platform between Chiado and Carmo (Bairro Alto). This interior patio will allow the crossing of alternative paths opening new possibilities of permanence in the public space.

Path: the intermediate platform

The opening of passageways from surrounding streets (Carmo and Garrett) (Fig.3[D]), and the fact that there are changes in level allows one to discover an alternative path to the main street. The possibility (not accomplished yet) of being able to access the upper level via a ramp, building a scenographic approach to the 14th century convent like a "promenade architecturale", is the element with strongest impact in the project (Fig.3[A]). The fact that the ramp covers an old pathway destroyed in the 1755 earthquake that shook Lisbon, reinforces its relevance and importance in the construction / topography relationship. This project transforms the relationship between the different levels of the surroundings, affording other possibilities of mobility.

Permanence: residual space

The interior space of the block is elongated and considerably vertical. Although it is transversally divided into two large spaces by a retaining wall that allows an underpass, one can look at this space as a "corridor" (Fig.3 [C]). The counterbalance between the central nucleus and the different structures creates small spatial groups - residual spaces.

4 - IMPÉRIO - CHIADO

The block of the insurance company "Império", attributed to Gonçalo Byrne's redesign, integrates an intervention carried out to eight buildings in the upper zone of Chiado (Fig.4). The project of private initiative was carried out between 1994 and 1998. The town council license regarding the commercial area has still not been attributed to this work, which is currently completed. The procedure does not involve all the buildings in the block. However, it allowed the interior of the block to be restructured into a public space. The programme comprises residential, commerce and business-related procedures. The intervention was carried out in the following streets: Garrett, Serpa Pinto, Travessa do Carmo, Almirante Pessanha and Calçada do Sacramento (Fig.4[B]).

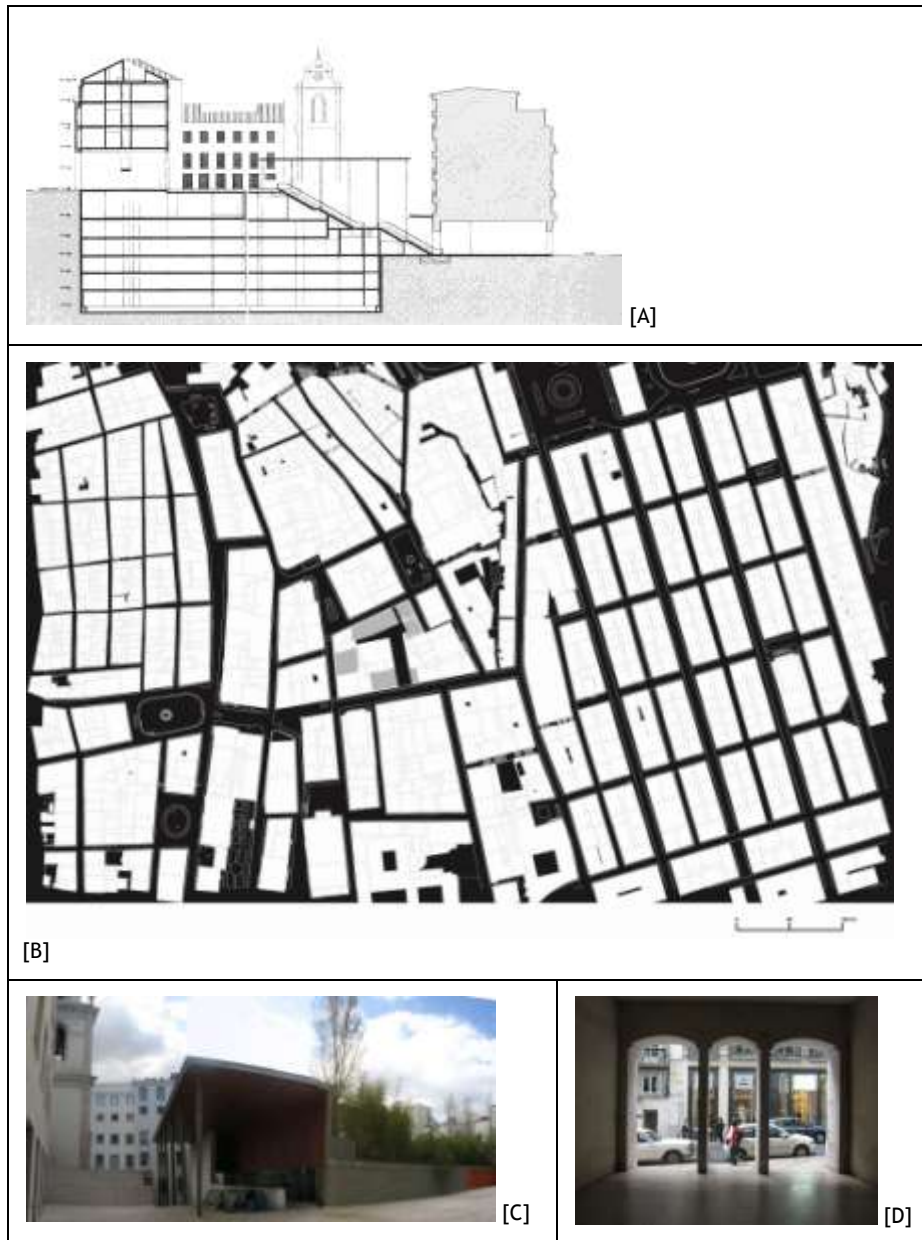


Figure 4: "Império" Block; [A] section between Carmo and Garret St (Source: Angelillo, 1988); [B] location plan: public space(black), case-study (grey); [C] view of escalators; [D] access to Garret St

Urban strategy

Similarly to the Bloco B and Church of the Sacred Heart of Jesus projects, this intervention also introduced the possibility of linking two different levels and a new crossing was built across the block (Fig.4[A]). Similarly to the procedure in Bloco B, there is the wish to counterbalance the current morphology with the possibilities that once existed in the pre-Pombaline city. By introducing various uses and by redesigning the interior spaces of the block, the urban fabric was revived. A possibility was created to introduce a crossing and also to discover unique elements such as the bell tower of the Sacramento Church (Fig.4[C]).

Path: morphological understanding

The path joins Travessa do Carmo (side street) and Garrett Street. Access to this path is made via passages in buildings on both streets. From Garrett Street, the passageway invites us into a small commercial courtyard that will connect to the

car park and to the stairs (Fig.4 [D]). Part of the upward/downward path can be completed on escalators. The part of the escalators that goes from the interior space to the upper level street is covered (Fig.4[C]). Here one finds the Sacramento Church tower and from this place one can continue up to the passageway to Travessa do Carmo (side street).

Permanence: residual space

The public place is triangular and features as a transition area between the access and change in level; however, it is considered as a residual space.

5 - PAVILION OF PORTUGAL

The Pavilion of Portugal's design was developed by the Portuguese architect Álvaro Siza Vieira between 1994 and 1997 (Fig.5). It was built within the scope of Expo 98, which took place in Lisbon. It was thought out to house the expositions during the world fair but its future use was never defined and is still unknown. It is currently used for culture-related events and expositions. The Pavilion includes two parts: the two-storey building and a covered square. The development of the project and of the building work took place simultaneously with the development of the urban plan for the eastern area and the construction of the exhibition area. The building is located alongside the River Tagus in Alameda dos Oceanos in the eastern area of Lisbon - a former industrial area that became known as Parque das Nações after the World Exhibition (Fig.5[B]).

Urban strategy

The building is organized around two patios. The spaces are provided with the capacity to be subdivided and reorganized. This strategy of spatial flexibility affords capacity to adapt to various programmes. The fact that the urban fabric developed at the same time as the actual building helped the architect in the understanding that this would be the construction of a place. At the extremities (north, south, east and west), the Pavilion features public transition spaces. To the east, it extends into a labyrinth garden - a set of crosscut walls that help to diminish the scale of the building.

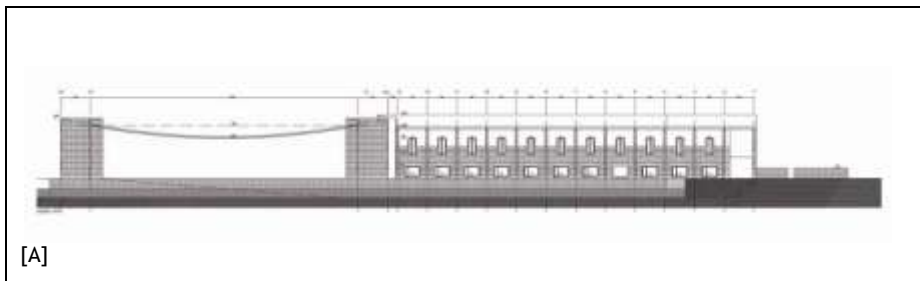




Figure 5: Pavilion of Portugal; [A] South elevation; [B] location plan: public space (black) case-study (grey); [C] view of the covered square; [D] South gallery

To the south, a gallery covers the noble balcony overlooking the river and creates a passage, a shaded and rest area (Fig.5[D]). To the west, two porticos support the sagging concrete roof that covers the square (Fig.5 [C]). To the north, a tunnel passageway gives continuity to the path around the building allowing one of the built elements to be crossed and “tied” to the urban fabric.

Path: entrances and crossings

Unlike the examples mentioned before, here there are no connection paths between different parts. The spaces related to the urban fabric permit crossing possibilities instead of directing specific paths as if accompanying those who are walking alongside the building. The three portico doors to the east of the covered square feature as an entrance into the main area. Between the building and the portico, there is a narrow street, a space that reinforces the verticality of the building group as a whole. The gallery in the south accompanies the path in the north/east direction and vice-versa. The labyrinth garden features a zigzagging path to the east. The north-facing passageway shortens the path to get back into the square.

Permanence space: the covered square, the seat wall

The covered square features two porticos that hold the convex roof made of light concrete (Fig.5 [C]). Both the porticos and the roof define the space that is slightly separated from the building. This separation is just enough to create tension between the built element and emptiness but it continues to be viewed as a whole. This is a crossing space in all directions. Its privileged location and enhanced features make the covered square the ideal meeting point. The roof affords an

inviting shade that makes this a space of permanence. A place for solemn ceremonies, this square is the hall that precedes the entrance of the building. On the façade to the south, under the gallery, there is a stone seat wall that invites passers-by to sit and contemplate the river (Fig.5[A]).

Conclusion

In addition to the programmatic dimension of the construction (church, cultural centre, residence, commerce), the specific relationship that the latter establishes with the city form allows to generate situations in which the construction can design urban micro spaces. Differences in plot levels and urban density favour these strategies as one can observe in the cases of the Church, Bloco B and the Império block. These constructions stand out because they allow rearranging a part of the urban fabric by introducing crossings and new paths. The purpose of building a large-scale structure, like the CCB and the Pavilion of Portugal, allows for the emergence of spaces of permanence (patio-square /covered square) - intermediate spaces between architecture and the urban fabric. These case studies - different in terms of location and time, of private and public promoters - demonstrate the possibilities of projecting the urban design based on architecture, thus contributing toward the definition of a relationship between the positive quality of the buildings and the quality of urban landscape.

REFERENCES

- Angelillo, A., Ed. (1988). Gonçalo Byrne: Obras e Projectos. Documentos de Arquitectura. Milão, Editorial Blau, Lda / Electa.
- Busquets, J. and Correa, F., Eds. (2006). Cities X lines: a new lens for the urbanistic project Rovereto, Trento, Nicolodi Editore.
- Castanheira, C. and Santos, J.D., Eds. (1994). O Chiado. Lisboa. Álvaro Siza e a estratégia de memória. Granada, Delegación en Granada del Colegio de Arquitectos / Junta de Andalucía.
- IPPC (1989). Centro Cultural de Belém - Concurso para o projecto. Lisboa, IPPC.
- Lang, J (2005) Urban Design: A typology of Procedures and Products. Oxford, Architectural Press
- Llano, P. and Castanheira, C., Eds. (1995). Álvaro Siza: Obras e Projectos. Lisboa, Electa.
- Matos, M.C., Ramos, T. B. and Gonçalves, F. (2008). Crossing through the block: permeabilities in the urban fabric of Portuguese Cities. Public Versus Private Planning: Themes, Trends and Tensions, University of Florida/University of Illinois, Chicago, Illinois.
- Risco. <http://www.risco.org/pt/index.html>. Retrieved February 2010.
- Rossi, A. (1966). L'Architettura della Città / A Arquitectura da Cidade. Lisboa, Cosmos, 2001
- Rowe, C. and Koetter, F. (1978). Collage city. Cambridge, Mass., MIT Press.
- Tostões, A., Ed. (2004). Arquitectura e Cidade: Atelier Nuno Teotónio Pereira. Lisboa, Quimera Editores, Lda.
- Trigueiros, L., Ed. (1985). Álvaro Siza: 1986-1995. Lisboa, Editorial Blau