The Way to the Waterfront. A Walking Methodology for the Analysis of Public Space

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Abstract. In an approach to the city that refuses to be confined to its merely physical features and includes an interdisciplinary perspective, it is crucial to find mechanisms to study its multiple dimensions and experiences. This paper proposes a reflection on the existing research in fields such as Architecture and Urbanism, discussing the importance of specific methodologies for the analysis of territory. This discussion builds on an example of research about the connections between a city and its waterfront, the case of Lisbon. Here, the main methodology is based on in situ observation and its subsequent systematization, finally configuring a graphic and visual approach to the study of public space. This methodology can be applied to other urban realities not only for the analysis of public space but also for its design..
Keywords: Lisbon; methodology; public art; public space; waterfront.

[es] El camino al malecón. El paseo como metodología de análisis del espacio público

Resumen. Para realizar una aproximación a la ciudad que no suponga reducirla a sus componentes meramente físicos y que incluya una perspectiva interdisciplinar, resulta fundamental encontrar mecanismos para estudiar sus multiples dimensiones y experiencias. Este artículo propone una reflexión sobre las investigaciones existentes en campos como la arquitectura y el urbanismo que debaten la importancia de emplear metodologías específicas para el análisis del territorio. Este trabajo se centra en la investigación sobre las conexiones entre la ciudad y su malecón, concretamente en el caso de Lisboa. Aquí, la metodología se ha basado fundamentalmente en la observación in situ y su consiguiente sistematización, para configurar finalmente un acercamiento gráfico y visual al estudio del espacio público. Esta misma metodología puede ser aplicada a otras realidades urbanas, y no solo al análisis del espacio público, sino también a su diseño.
Palabras clave: Lisboa; metodología; arte público; espacio público; malecón.

1. Introduction: The subject of the research

Recently, the subject of waterfront cities has given rise to a large amount of research. However, this discussion remains at the waterfront and rarely encroaches into interior of the territory. Most of the studies focus on the waterfront areas[2] or their reconversion operations and do not address how these areas interlink with the interior of the urban space.

Assuming that the waterfront has to be connected with the rest of the city areas, this paper focuses on a methodology to analyse how the waterfront is *exported* to the rest of the city. This

methodology intends to characterize the public spaces that perform that articulation, as well as to investigate how the water is seen and perceived as a constant reference in those public spaces.

From the comparison of different waterfront cities, it is possible to identify a territorial system underlying their urban structures, consisting of two interconnected urban logics: a *horizontal logic* composed of a set of urban axes parallel to the waterfront, and a *vertical logic* composed of a set of urban axes transverse to the waterfront. Because of its physical configuration, this territorial system was called *comb structure* (fig. 1).

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[2] The waterfront is considered the areas with a morphological unity within the overall organization of the respective cities, which correspond to the corridor of contact with the dividing line between the land and the water (Costa 2007).

The urban development along the waterfront would justify the *horizontal logic*. The need of a physical connection with the remaining areas of the city, for different reasons, at different historical moments, in different ways, would justify the *vertical logic*.

The development along the waterfront and the need to connect it with the inner city are common aspects in waterfront cities. So, the *comb structure* is like a paradigm of these cities, a territorial system that characterizes them. However, depending on different factors, it occupies the territory distinctly; hence, each city has its own *comb structure*. In other words, although being common to waterfront cities, it acquires specificities in each one of them.

Fig. 1. *Comb structure in Lisbon and Barcelona* (from top to bottom).

From Lisbon's *comb structure*, it is evident that the public space plays an important role in the *vertical logic*, in the articulation with the waterfront, because of the way it physically and visually allows that connection. But the *comb structure* is also a symbolic system. The different ways of physical and visual connection are related with one key factor: the existence of Public Art in these urban structures (fig. 2).

Fig. 2. Structure of articulation in Lisbon, integrating Public Art.

Thus, we will explore two main points of focus: beyond the study of public spaces that integrate those urban structures, the role of Public Art in that articulation will be explored, as well as the monumentalising of the waterfront.

At this point, it is important to clarify that here Public Art is considered from an inclusive perspective, rejecting the point of view of Public Art as an isolated object, restricted to common assumptions such as monuments, sculptures or statuary. Besides its aesthetic values, Public Art is viewed as an urban fact, establishing physical and social relations with the urban environment.

On the other hand, the concept of Public Art refers to all the elements that can monumentalize the urban space; it considers some urban facts that although they might not have been intentionally produced to be public art, they can be perceived as such, therefore having gained particular value, because of their symbolic features[3].

In summary, intentional or unintentional, the concept of Public Art includes the elements that give symbolic value to urban space, monumentalising it (fig. 3).

2. The construction of a methodology for the analysis of the territory

And so, walking or quickening his pace, he goes his way, for ever in search. In search of what? We may rest assured that this man, such as I have described him, this solitary mortal endowed with an active imagination, always roaming the great desert of men, has a nobler aim than that of the pure idler, a more general aim, other than the fleeting pleasure of circumstance. He is looking for that indefinable something we may be allowed to call 'modernity', for want of a better term to express the idea in question. The aim for him is to extract from fashion the poetry that resides in its historical envelope, to distil the eternal from the transitory[4]. (Baudelaire 1976 [1869]: 68)

> The promenade […] constitutes the best way to explore and cherish a city[5]. (Sansot 2004: 248)

To better understand the articulation with the waterfront, we decided to focus the analysis on a specific city. The choice fell on the city of Lisbon, for the following reasons:

1. It is a waterfront city. Its relationship with water is one of the main features of Lisbon and defines its identity (Matias Ferreira 2004);

2. It is also a port city. The type of articulation with the waterfront is strongly related to the existence of a port. This reinforced the need for physical connections with the territory, with the movement of products and the transportation systems having driven the articulation with the inner city and with the exterior;

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[3]   This inclusivity in the understanding of Public Art corresponds to a double origin in the processes of symbolization of space. When a body of the social structure promotes and proposes creation or changes in urban environments, with a specific intention and exercising an act of power, we are in the presence of symbolism a priori. When an object or a place spontaneously gains certain meanings for every individual or for the social group as a whole, through time and use, we are in the presence of symbolism a posteriori (Pol 2005). Therefore, Public Art includes striking elements that stand out in the urban profile, such as objects related to the port and industrial landscape, church domes, towers, large-scale buildings and bridges. Or even natural elements, like, in Lisbon, the 2 Palm Trees of Chelas, a symbol of the inhabitants' resistance to an urbanization plan for the Chelas valley that has not been implemented. Finally, Public Art also can include some banal elements that are monumentalised by new placements. A Propeller placed on a lawn, a Factory Chimney maintained in Alcântara are examples of this trend.

[4]   "Ainsi il va, il court, il cherche. Que cherche-t-il ? À coup sûr, cet homme, tel que je l'ai dépeint, ce solitaire doué d'une imagination active, toujours voyageant à travers 'le grand désert d'hommes', a un but plus élevé que celui d'un pur flâneur, un but plus général, autre que le plaisir fugitif de la circonstance. Il cherche ce quelque chose qu'on nous permettra d'appeler la 'modernité' ; car il ne se présente pas de meilleur mot pour exprimer l'idée en question. Il s'agit, pour lui, de dégager de la mode ce qu'elle peut contenir de poétique dans l'historique, de tirer l'éternel du transitoire". Translation available at http://www.writing.upenn.edu/library/Baudelaire_Painter-of-Modern-Life_1863.pdf (p. 6).
[5]   "La promenade […] constitue la première manière d'explorer et d'aimer une ville".

Fig. 3. Public Art at waterfronts (Lisbon) (from left to right, from top to bottom) Railings of an industrial window; "Compass rose" on the pavement, by Cristino da Silva; a Propeller near *Cordoaria Nacional*; "Reflection of the sky", by Susumu Shingu; Bridge of the *A Nacional* factory; "Sea monsters" on the pavement, by Pedro Proença; the 2 Palm Trees of Chelas; "To our heroes overseas", by Guedes de Carvalho and João Antero; Factory Chimney in *Alcântara*.

3. It underwent a significant process of industrialization. The infrastructuring of the territory connected to industry and the port had consequences in the articulation with the riverfront, which provoked ruptures;

4. Like other port and industrial cities, part of its waterfront was reconverted for an International Exhibition (Expo' 98), with replacement of port and industrial facilities.

Returning to the *comb structure*, we first had to decide which urban structures of the *vertical logic* would be analysed in Lisbon. We soon realized that a two-dimensional perspective would not be sufficient to make that decision. Hence the decision to go to the place, to enter into direct contact with the territory.

This contact with the territory proved to be increasingly important, to the point when we admitted that this would be the main methodological option. On the one hand, because references on the subject are almost non-existent, so we would have to construct a working basis from scratch. On the other hand, because only in the territory would it be possible to perceive all the qualities of public space that we wanted to study.

In this regard, this work is linked to the *Polis Research Center* of the University of Barcelona, where the study of Public Art within the city, the interdisciplinarity in the design of public space, and the approach of studying a city through contact with its territory are the main lines followed. The information obtained in the territory is compared to other data and organized graphically, like an urban atlas, with chronologies and time lines. It is also important to highlight the work of the *Laboratoire interdisciplinaire en études urbaines* of the Free University of Brussels,

which endorses the practice of walking as a technique for exploring urban space. Or the work developed by A. Jacobs and L. Gould at the *Institute of Urban and Regional Development* of the University of California, which proposes a reading of urban space through *walking field trips*.

In terms of bibliographic references, the work of Chemetoff and Lemoine (1998) *Sur les Quais. Un Point de Vue Parisien* presents an interesting methodological similarity with this research. It is based on fifteen routes (corresponding to the fifteen Quays), and its graphic systematization (drawn and photographic elements). Likewise, in *Poétique de la ville*, by Sansot (2004), the author proposes a method of observation and interpretation of urban spaces, through a sensitive experience of the place. On the theme of the walk, it is important to highlight the work of authors that discuss the walk as a *practice of everyday life*, such as Michel de Certeau (1990 [1980]) but also related to public protest and disruption of the public space, as Elizabeth Grosz (1996) or Rebecca Solnit (2006)[6].

Besides the references more closely related to the methodology and to the walk, it is important to mention various other approaches to urban analysis, namely the perspective of Bacon (1995 [1967]), Jackson (1980), Kostof (1999 [1991]), or Panerai *et al* (1999). As well as the work *Public Places. Urban Spaces. The dimensions of urban design*, by Carmona *et al* (2001), for the recognition of different perspectives in urban design, which also enabled analysing the articulation with the waterfront in its different dimensions.

Based on this framework and focused on the main objectives of the research, the work started with an exhaustive analysis of the territory, which consisted of three interrelated phases: 1) the fieldwork; 2) the systematization of the fieldwork; 3) the interpretation of the fieldwork.

2.1. The fieldwork

The exploration of a city and the determination of routes to reveal it take place in the interval between this manifestation and this

inevitable concealment of the city. (Sansot 2004: 82)

More than a territorial system, the aforementioned *comb structure* consisted of a schematic diagram that allowed the beginning of the fieldwork. While adopting the Lisbon administrative boundaries, the selection of the urban structures followed three fundamental criteria:

1. Be of urbanistic relevance;
2. Have a visual and physical relationship with the waterfront;
3. Contain public art.

According to these criteria, we selected 20 axes. Each was the subject of a walking route. In parallel, were identified 250 Public Art elements in these axes and along the waterfront. All these 250 elements were observed, photographed, and their date of placement in the public space identified.

A methodological aspect assumed from the beginning was the decision not to focus the study on a single city, but rather to assess whether the observed aspects in Lisbon revealed similarities with other situations. Here, we took the city of Barcelona as a counterpoint to the main case.

For Barcelona, the procedures were similar. Ten urban axes of articulation with the waterfront were selected. As in Lisbon, each one of them was the subject of a route. For the identification of public art, our source was the *Sistema d'informació i gestió de l'Art Públic de Barcelona*[7].

While the fieldwork was evolving in these two cities, the contact with the territory was acquiring its own procedures and common factors started to appear. Because of time availability, almost all of the routes were covered over the weekend[8]. The routes were done independently of the atmospheric conditions. For each route, the following procedures were adopted:

1. Starting where the perception of the water begins;

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[6] In parallel to the main research and in addition to the authors mentioned herein, we explored the theme of the walk to explore the public space, in different fields besides architecture and urbanism, such as the literature or the visual arts (Ochoa 2011).

[7] About the Sistema d'informació i gestió de l'Art Públic de Barcelona see the presentation text of the information system, at www.bcn.cat/artpublic

[8] By choosing specific hours and days, it was assumed that there would be some homogeneity in certain space characteristics, eliminating some "urban states" (greater movement of people, different experiences and routines, some specific illumination and light). However, this was considered an advantage, by providing a greater term of comparison between the different spaces.

2. Walking in the waterfront direction (in Lisbon, because of the topography, routes were always downwards);

3. Ending as close as possible to the waterfront;

4. Taking all the photographs in the same direction (turned towards the waterfront, in a sequential perspective), to convey a better idea of the route. Intentionally, the photographs were taken in a neutral way, avoiding particularly framings, special ambiances or moments. People and cars were always included, and *flash* was not used. Public Art was always photographed in relation to the urban context. Also, photos were taken horizontally, at the height of the observer and without approaches (*zooms*). No later image treatment was made (fig. 4).

Fig. 4. Photographing a route, from Rossio to Praça do Comércio (Lisbon).

2.2. The systematization of the fieldwork

After the routes, it was necessary to register all the information obtained in the territory. So, we decided to produce a set of graphic elements which would allow a later interpretation of that work.

First, a *Synthesis Plan* was produced, showing the placement of the routes (starting at the point where the perception of the water begins) and corresponding to the chosen axes of articulation with the waterfront. It also showed the placement of the Public Art elements, in the *comb structure*. This plan was produced both for Lisbon (fig. 5) and Barcelona.

Then, a *Chronological Plan* was drawn up, showing the different historical moments of placement of the 250 Public Art elements in Lisbon, which enabled a chronological understanding of the interventions in the public spaces.

To visualize the Public Art in detail of each of the 20 routes, a *Public Art Inventory* (Fig. 6) was produced which individually showed the 250 Public Art elements[9]. This inventory also referenced them to the structures and showed their relationship with the waterfront, by the colour of the photos.

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9   Each element includes a photo, the title of the work, the name of the author and the date of placement in the public space.

Fig. 5. Synthesis Plan (Lisbon)**.**

Fig. 6. Part of the Public Art Inventory (Lisbon).

Finally, we produced 20 *Worksheets* (fig. 7), corresponding to the 20 routes, according to their different components: the sequence of the various public spaces, the buildings and the elements of public art. These worksheets also included technical drawings such as longitudinal profiles, the location plan, the transverse sections and an aerial photo. These elements are common to all the 20 worksheets, allowing a comparison across the same parameters.

Fig. 7. Example of a Worksheet (Lisbon).

2.3. The interpretation of the fieldwork

> […] because the street is a route, its ends are usually decisive. How it begins and how it ends usually explains many of its features: does it simply transform into other streets continuing unceasingly? Does it start at a slight angle or set off from a flat traverse? Does it end in a "T" at a major avenue? Does a large imposing square articulate its encounter with other streets? Is the profile of that monument visible in the distance? Is it the sea or the mountains that is perceived on the horizon?[10]. (Parcerisa Bundó and Rubert de Ventós 2000: 18)

The articulation of cities' waterfronts is a complex reality that can be analysed by crossing different perspectives and from its different dimensions which, in juxtaposition, characterize it. Thus, from the observed territories and graphic elements produced, we propose an interdisciplinary interpretation of public space. Each axis of articulation has its specificities, as a result of certain actions on the territory. The set of all the axes, in conjunction with the particularities of the waterfronts, defines and characterizes the entire articulation.

Throughout the different areas of the city, the access to the waterfront varies depending on the incidence of certain factors, namely the occupation of port and the existence of road and railway barriers. But the enjoyment of water in the cities does not necessarily imply a physical access to it. In areas without physical access to the waterfront, the visual access plays an important role.

Morphological aspects have a direct influence on the way the water is visualized in the city. In this sense, it is important to note the differences between the two cities under study. While Lisbon, due to a more rugged topography, has a more dynamic visual relationship with the waterfront, in Barcelona, the waterfront is only visible in its proximity. On the other hand, a higher incidence of rupture factors along the water and a greater diversity of the urban fabric (Dias Coelho 2002) result in Lisbon, in a worse physical relationship with the waterfront. In Barcelona, the physical articulation is more fluid, assured at certain points, by large transversal axes (the West) or promoted, in a more homogeneous way, by the *Eixample* (the East).

The connection to the waterfront can be more or less direct. The speed of the articulation is dependent on factors such as the quantity and quality of public spaces, the topography, the type of roads that make up the axes (infrastructural scale or urban fabric scale), or the incidence of rupture elements in the public space.

The inherently symbolic nature of waterfronts makes them excellent cities for the placement of public art (Remesar 2002; Ochoa 2011). Thus, we have many examples at the waterfront of the water, as well as along the

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10 "[…] porque la calle es un recorrido, sus extremos suelen ser decisivos. Cómo empieza y como termina suele dar razón de muchas de sus características: ¿se transforma en otra(s) calle(s) sin apenas solución de continuidad? ¿Empieza con un ligero esviaje o arranca de un cruce homogéneo? ¿Termina entregada en 'T' contra una avenida mayor? ¿Una gran plaza potente articula el encuentro con otras calles? ¿Enfila el eje de ese monumento visible a lo lejos? ¿Es el mar o las montañas lo que se percibe en el horizonte?".

axes, valuing the articulation. In some axes, the number of Public Art elements increases as get closer to the waterfront. In other cases, the Public Art is placed throughout the access route and not just near the water. Regardless of the type of placement, these elements of Public Art give the *comb structure* a symbolic sense. Thus, it can be characterized as an underlying territorial system of the waterfront cities, but it is more than that: it is also a visual and symbolic structure.

Finally, we conclude that the integration of the waterfronts in the cities is made by means of a complex territorial system and by a structure that physically, visually and symbolically enhances the value of the water in cities.

3. Conclusions: The possibilities of and from the graphic analysis

The described methodology sets up a unique approach whose results were based almost exclusively on the direct observation of urban spaces and on the graphic elements produced.

Through the proposed fieldwork interpretation, we categorized the different situations observed. We also introduced concepts and identified abstract models which, despite being derived from Lisbon and Barcelona, can be compared with and tested in other cities. In the study of other realities (and in particular of other waterfront cities) it may be appropriate to apply the methodological procedures adopted herein and cross them with other types of approaches – morphological, perceptive, among others.

Also, the processes of Public Art and public space are constantly evolving. We believe that for the study of these processes it is necessary to observe the territory directly, allowing for a better understanding of its dynamics and experiences. In fact, besides the conclusions inherent to the main subject of study, the articulation with the waterfront, this research proved that contact with the territory is crucial for the study of the city, in order to further understand its multiple dimensions.

In the light of the later use of the knowledge acquired on the territory, and to make it perceptible to other people, it is very important to systematize it. We recommend this systematization through the production of graphic elements taking into account the specificities of each context.

The graphic analysis enables a very comprehensive understanding of the territory; and it enables – within the working tools that are typical of the architect's specialization – an *a posterior* interpretation of the city. For example, with regard to the subject of this research, assuming that the chronology of the placement of Public Art is also a chronology of urban interventions, the graphic elements reproduced herein show quite clearly which areas of Lisbon have been privileged over others.

Finally, graphic analysis also has the advantage of translating the territory in a more communicative way and the potential to being the city closer to more people, boosting greater identification with this kind of research.

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