



PUBLIC SPACE NEW STREETS TYPOLOGIES – A MATTER OF FACT (HARDWARE AND SOFTWARE)

Pedro Brandão

Universidade de Lisboa, Lisbon – Portugal. **E:** pedro.s.brandao@tecnico.ulisboa.pt

Ana Brandão

Universidade de Lisboa, Lisbon – Portugal. **E:** ana.luisa.brandao@tecnico.ulisboa.pt

Nuno Travasso

Universidade do Porto, Porto – Portugal. **E:** ntravasso@arq.up.pt

Maria M. Silva

Universidade de Lisboa, Lisbon – Portugal. **E:** m.matosilva@fa.utl.pt

Sofia Águas

Universidade de Lisboa, Lisbon – Portugal. **E:** sofiaaguas@sapo.pt

Núria Ricart

Universitat de Barcelona, Barcelona – Spain. **E:** nuriaricartulldemolins@ub.edu

ABSTRACT

Mobility and global communication acceleration, were identified (Ascher 2001) as new integrated time/space interactions, requiring not only new types of urban physical structures that we call public space ‘hardware’ but also new social meaning relations and ecologic representation categories, we call public space ‘software’.

Public space has an important part in urban space production process, with growing relevance in expectations for new social and cultural agency, adaptability to new needs and ways of life and enlarging the scope of urban life diversity. However, dominant literature is still focused on public space assets as ‘image quality’ with evidence of its present roles as leisure “lifestyle” commodities.

This paper aims to present an approach on public space as an urban system, a side-production of the research project PSSS (Public Space’s Service System), that fosters a new assessment method based on the needs/benefits public space regards. Assessment principles and tools are discussed on a set of emerging ‘hybrid’ examples, chosen so as to show the growing variety of “what is public in public space”, helping to validate the interpretation of Public Space as a service system.

KEYWORDS

New public spaces, system, service, interpretation, assessment.

INTRODUCTION

We may now look at new typologies of 'hybrid spaces', as those with a complexity arising from more than one 'service character' of what is public in urban space.

Growing diversity of spatial systems is due to new time and space urban relations: either connected to actors' social or economic relations, or to new interacting scales contexts. Multidimensional interdisciplinary interpretations may testify the way those new types occur: it is now reductive to say 'what a street is', by referring each space type to one and only pre-defined service (for instance – mobility).

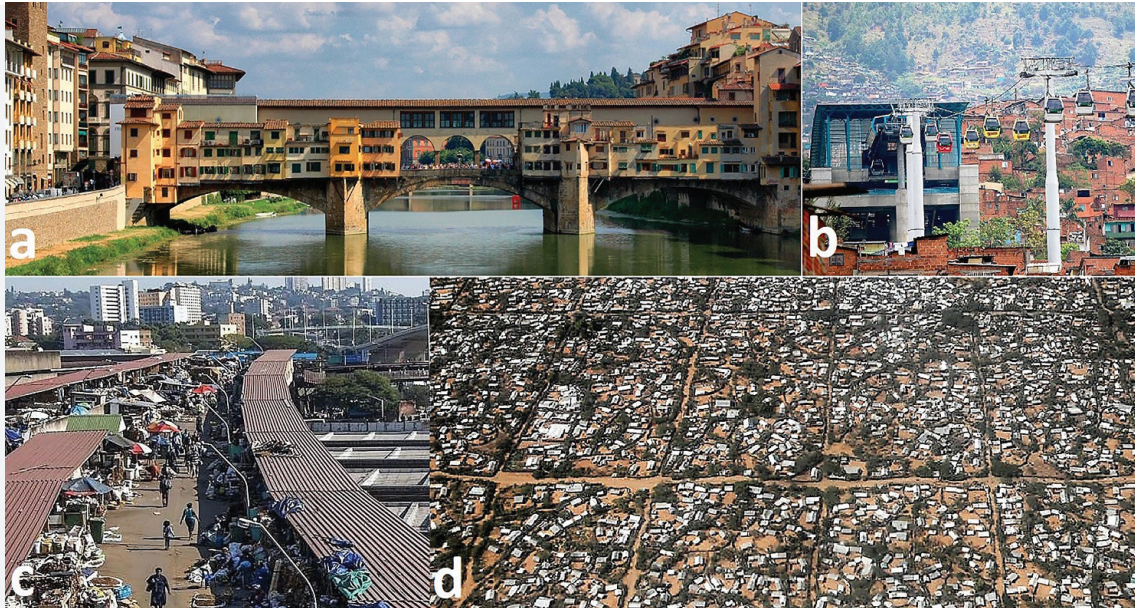


Figure 1: a) Ponte Vecchio, Firenze; b) Medellín, Colombia; c) Junction, South Africa; d) Hagadera refugee camp. (Sources: a) Firenze Tourism; b) Metrocab Medellín; c) kznia.org.za; d) A.Dantas, 2015)

Past examples gave us hybrid places, such as Ponte Vecchio, Florence (Fig.1a) which could be enough to show how changing market trends generates regrouping of public space services, adapting mobility space with retail economic goals. Today, changes occur suddenly and hybrid types appear in different situations:

- spreading of third world giant cities is bringing new types of "no-road" mobility like Medellín's cablecar offering additional service on its stops (Fig.1b);
- a hybrid 'self-adaptation' in Durban Warwick Junction (Fig.1c) a "CBD" interchange where thousands commute between market and adjacent areas, below overhead roads of an abandoned freeway (from Apartheid regime era);
- a rare case in long lasting refugee camps, Hagadera in Kenya (since 92), with 106.000 refugees (Fig1.d.) allowed residents to change residential units position creating their own landscape (Dantas 2015) with true 'life between buildings'.

Such as the Middle Ages' bridge became a market/building/street/bridge, every time the public "reclaims the street" (meaning space of social and economic interaction), there's a hope in new potential for "commons" governance, to be found by people movement, opinion, interaction, shortly, in shared space practice and meaning.

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people's movement, opinion, interaction; shortly, there's a shared space practice, when the public naturally "reclaims the street" for different purpose.

From Hardware to Software on a Service System framework

Public space is relational – it establishes links with private places and other public spaces, it joins users together and hosts a variety of common services ranging from functional to symbolic values. Public space may be considered as a continuous system of places, organized in physical, functional and meaning continuity relation. This means we should consider public space systems related to infrastructures or to ecological systemic features, even if they spread outside typical urban settings. So we may organize a Public Space System framework regarding three main elements:

- Components: anchor spaces; connections;
- Dynamics: external; internal links;
- Interaction: landscape; infrastructure; communication.

What Are Public Space's Services?

The concept of service applied to physical space was developed in ecology, through 'ecosystem services' - the benefits that people obtain from ecosystems, addressing the value of 'natural capital'. By analogy, we acknowledge public space system, also providing benefits to its users: regarding their current or future needs. Public space as a common space (open to all users), enables public goods provision and supports vital activities. We can organize service topics in three related groups:

- Support: including access; provision; hosting; regulation;
- Interaction: including trades; meeting and recreation; mobility; control;
- Reference: including image; cultural & symbolic.

In this context, public space can supply more than one service and combine several urban functions in multifunctional places. For instance, street dominant service is related to mobility – movement of people, vehicles and goods - although it also supplies many other services, such as shelter and climate regulation through tree planting, access to street markets and other facilities in surrounding areas, or new identities based on symbolic references of architectural, artistic, toponomy features.

NEW PUBLIC SPACE TYPOLOGIES – CASES AND ARGUMENTS

Complex urban transformations now promote public spaces diverse typology and roles, even in non-canonical urban environments. We present several case-studies analysis (based on our research assessment framework), by discussing public space diversity in interconnected urban contexts and interdisciplinary approaches. In such a process, are we in-between 'times and territories' (Brandão & Brandão 2013)? Are we talking about Town Planning, Urban Morphology, Public Art, Landscape Architecture, Urban Geography, History, Sociology or Ecology? As Bonnet Correa (1995) we say "Nothing more changeable is studied... interaction between physical space and social space belongs not only to the present but also to cities future"

Today's need for diversity in public space isn't just a picturesque visual effect, but a sign of a more complex society where models cannot be static nor dogmatic.

The surprising variety of following cases shows cultural differences that mustn't be neglected. Public space services are no longer just a matter of access and image, but of any commonly adopted public value: from sharing to trading, from nourish to information, from memory to meaning... and many more of public space assets.

Local Public Space As "Zero Grade Urban Hybrid" - Antofagasta, Chile

Harbour city of Antofagasta is located in the northern border of Chile hosting two-thirds of its population. The city plays an important role to Chile's economy due to the mining industry. According to OECD (2013) Antofagasta generates high growth rates and accomplishes one of the highest economic standards of living in the country. However, there's an enormous gap between poverty measured by salaries - only 4% of population - and poverty according to multidimensional criteria - health, education, work and housing - affecting more than 20% of its population - an enormous divergence between economic growth and social development.

Antofagasta's urban area occupies 30,7 km², limited to a thin fringe (ap. 27 km long in north/south direction by 2.5km wide) between the Pacific Ocean and the coastal mountain chain. A particular landscape has developed, between the driest desert in the world and the waterfront, exposed to natural hazards such as earthquakes, tsunamis and landslides.

Despite a long coastline and proximity to 2600 hectares of natural reserve, the city has not been able to take advantage on these natural resources to offer a systemic public space. There are big problems with infrastructure (air and water supply, pollution, waste, illegal open landfills, transport and housing, overpopulation of stray dogs, etc.). Explosion of shantytowns (campamentos) in the city's upper part lack basic habitability conditions. Most of the population perceive the city as a place to work (high incomes) rather as a place to live (OECD 2013), weakening local identity and community sense by supporting public spaces value, service, meaning.



Figure 2: Antofagasta dominant public spaces. (Source: S. Águas)

Antofagasta lacks public space (green space average is 2.3m² per capita with discrimination due to high socio and spatial segregation). Therefore derelict spaces in roads, squares, parks and gardens trying to tame region's aridity and waterfront walk space with hard floors of exuberant colors breaking dull surrounding desert.

The last years several urban studies aiming the renovation of historical center and maritime front have allowed some change in city's face, improving sea access, as well as historic center upgrading. New plans with interventions in public spaces, denote an effort so as to attract publics and activities. However, plans are generally outdated prior to their implementation, due to time they take and rigid structure.

Meanwhile, streets are there, and people use them, in work as in leisure as in transportation, as their own public space (Fig. 2).

Ave Valley, North Portugal: A "Road-Street Hybrid", as Urban Becoming

Ave Valley is covered by an extensive diffuse settlement with roots in very ancient times. In XVIII century, the whole region was already described as a "continuous city" (Castro 1762, p.48), and since then its occupation has been continuously and progressively intensified, even though last decades witnessed sudden growth.

Today, its territorial organization defies canonical urban models. Cornfields, vineyards, greenhouses, private vegetable gardens, eucalyptus and pine woodlands, factories of all sizes, commercial buildings, churches, and houses (detached, small groups of semi-detached or terraced houses): everything is mixed in a pattern of very small plots fed by highways and ancient rural paths dense network.

Words such as square, park, boulevard or street seem to make no sense and yet, there is a large system of collective spaces that provides a considerable number of public services to that territory and its citizens. The "road street" (Domingues 2009) is the chief element of this system.

Several activities (shops, factories, services) have gathered along roads in order to benefit from access provided and people passing by. These activities operate at a regional scale, but they also function at a local level, concentrating along the road. In this way, roads as hybrid spaces, mix different types of movement – sharing the same space. Such a mixture creates conflicts in physical space itself: in a road designed for fast long distance movements, we can find parking lots, direct access to shops and houses, zebra crossings, small parts of sidewalks.

It is a road and a street at the same time. The road street is just an element of a wider network made of old rural paths infrastructure (water supply, sewage, electricity, broadband internet, etc.). Network gives infrastructural support for progressive densification and permeability values. Collective spaces were created by last decade's small urban developments. Similarly to the road street, paths gather new functions over the years, as houses, shops and services are built along (Fig. 3).

Where a path become wider, namely in crossroads, place is chosen to install uses that do not fit in any other place, such as a bus stop or garbage recycling bins... These enlargements become a reference in an apparently uniform urban fabric, a meeting point where people gather for a chat. This space system provides important public services. However, people passing by do not recognize this system as such, despite multiple practices they may undertake there. Public space mental maps are made of points: churchyard, school, coffee shop, with annual festival at the top.



Figure 3: Latent public space – a value in its own? (Source: F. Jorge; N. Travasso)

As Dehaene (2013) explains, there is an important step to be taken from the moment in which a collective space is understood only as an infrastructure, solving problems created by agglomeration, to the moment when that same space is understood as a value in its own, when it is collectively appropriated, social feels are represented, to have a say in the decisions about its future. In Ave Valley, collective spaces networks create latent public space systems that can be made evident and appropriable. This could be done by redesign, creating a public discourse and debate about them, in other words, it could be done by making those spaces public (Latour 2005; Dehaene et al. 2014).

Cacém, Portugal: “Road-Rivers Hybrids” Adapting Climate Change

As a direct consequence of accessibility to Lisbon’s city centre by railway and highway infrastructures, Cacém became one of Lisbon’s satellite suburban cities. Jardas stream, at its center, highly susceptible to recurrent floods episodes (Pinho et al. 2008). In addition, suffering from the lack of planning, Cacém was densely built with affordable housing leaving little space for public use. The few existing public spaces were generally occupied by waste containers and car parking from commuters. Yet public life was rich, “one could see older people gathering in the few zones along the riverbank near the plane tree, where occasionally, younger people playing, walking to school and back...” (Lourengo 2018).

From 2003 to 2008 Cacém downtown was subject of an environmental and urban regeneration project which main objectives focused on mobility, identity, habitability, productivity and sustainability improvement (Programa Polis Cacém 2000). Intervention included requalification of Jardas stream through the creation of a retention basin as part of an extended linear public park at the center of an intricate urban fabric regeneration in surrounding public spaces, road networks restructuring, transit reorganization and new buildings design (ibid.).

Ultimately, the project sought to promote a new centrality based in the linear stream shape and adjacent areas, connecting both margins and corresponding urban areas, in a coherent public space system.

Given the implications on public safety, flood management of this urban area was considered a priority and the main generator of the whole project. In opposition to the mainstream approaches of flood defense (with rigid and extensive channel regularization measures) the option was to increase stream’s water catchment and retention capacity,

with more space for watercourse flow. The choice to manage flood risk made this endeavor a pioneer intervention in Portugal by that time.

Combining the need to fix flood management engineering with social needs, leisure, recreation, and a new local character, the public park embraces interdisciplinary design process with integrated planning, engineering and landscape architecture, as a condition of overall result.

Some infrastructural and ecological benefits of this intervention are evident: peak flow and flood occurrences were reduced, infiltration areas increased, biodiversity became richer. Repercussions are felt not only at the local level but also at regional scale of the hydrographic basin. Among others, sewers were intercepted to new conduits parallel to the stream, native riparian vegetation was planted and, only when necessary, the stream was regulated with structural rigid measures.



Figure 4: Jardas linear park - the rise of an original centrality. (Source: M. M. Silva)

Besides ecological network and public space system continuities, other design benefits include the reduction of flood vulnerability with the engagement and awareness of actors with natural hydrological processes; the stream exposure, within a multi-purpose public space, as unique and common values and the consequent monitoring by its users (Silva & Costa 2018).

Jardas linear park gave rise to an original centrality which may furthermore contribute with potential benefits such as the revitalization of the adjacent train station interface or even the emancipation of a new larger identity (Fig. 4).

Together with other well-known examples such as Cheonggyecheon river - Seoul, South Korea; Kallang River - Bishan Park, Singapore or Catharina Amalia Park at Apeldoorn, Netherlands; amongst others (Matos Silva 2016), one may question whether waterways can be considered as part of a design lexicon, from climate change adaptability in landscape projects within contemporary public spaces.

Barcelona “New 3D Ramblas Hybrid” as Shared Space Interfaces

Barcelona urban history had its most notable moment when Cerdà presented his “Ensanche” project on the base of a unifying grid, from the mountains to the sea. Mountain-to-sea relation is also present in Ramblas typology - a kind of avenues designed in sea direction, giving advantage to pedestrian area, offering adaptability services: while summer vegetation shadows and refreshes strolling social habits, an adaptable draining system controls floods in strong winter storm events.

In recent times of global car ownership, Ramblas adaptation provide new strategies pioneered by new ramblas design experiences, adopting the third dimension (section) with underneath layers for quicker long distance routes' service, while exterior open air lanes, offer wider pedestrian spaces. We define it as 3D (third dimension) connection. The goal is to find connections, in "collaboration" between mobility values, using vertical space to multiply options of 'interface service'.



Figure 5: Granvia, Rondas, Junction: Interface service and public service – all in one? (Sources: P. Brandão; J. Henric; Barcelona Archives)

Other new typologies have grown in last decades (Brandão 2011). Rondas are speed circulars, allowing large pedestrian areas to cross infrastructure level, through parks, sport areas and other public spaces. Grand Via is a type of hybrid system crossing all Barcelona horizontally (originally a highway) finding section space to adjust different corridors and separate several speeds' flux (long distance, local, light rail metro, bus, bicycle) and extra space for landscape amenities. Trinità is a huge traffic junction at north Barcelona, connecting suburbs, offering a large calm park with sports facilities, outside barbecues, art and no traffic noise nor car smoke.

While other hybrid typologies drive from these examples, systemic alternatives requiring instead of different speeds in different spaces, the principle of one only space with one only shared "corridor" for everyone. It's the case for a different rational (and new principle) created by Hanz Monderman (2007), a Dutch traffic engineer demonstration of shared space, by eliminating street lights, signs, lanes' delimitation, designing space as common interaction place, instead of separation. What is the better service of circulation or what is the better service of public space and how to decide between the two? This is the false dilemma that sharing-space clarifies: Isn't public space about relational and interdisciplinary interaction space?

Lisbon: Metropolitan Panorama Cycling Path as "Hybrid Landscape"

Lisbon metropolitan area (LMA) urban growth was sustained by industrial development and later by suburban dynamics (Tenedório 2003). As result of rapid but ill planned urban expansion, many spaces are characterized by disconnected parts or poorly designed public spaces, similarly to several south European urban change processes. In last decades, new public spaces and redesign of the existing became a priority, leveraged by municipal initiatives, EU funding, or central government programs. Within these, some

public spaces led waterfront site projects for regeneration actions, mainly those related to Tagus Estuary adjacent cities.

Most of those spaces aim at regenerating central areas, strongly embodied in local identities, linked to river activities, at the least embedded in remembrance discourses; others are fostering recreation and leisure functions, within new lifestyles and urban landscape imagery (Fig. 6).



Figure 6: Diversity of multipurpose waterfront spaces within Lisbon Metropolitan Area. (Source: A. Brandão)

Apart from typical promenades and pleasant landscaping contexts, there are all sort of projects: green public spaces - either in formal urban parks or semi-natural and natural settings - allowing access, nature enjoyment or environmental recovery actions; soft mobility features - cycle paths, walk and running tracks, new or extension of pedestrian areas, links to transport hubs and infrastructures' renovation – as well as in sewage and drainage networks, or frequent car traffic mitigation schemes. Many of these structures already surpass local insertion, providing connections between urban nucleuses and attracting users beyond local context. They may become part of a larger network of relations and services with extension and/or connection of relevant linking structures throughout different municipalities. Public spaces continuity can be developed in different scales and frameworks (Pinto & Brandão 2015), either within a municipality or at metropolitan scale.

Some municipalities already seem to take this as urban regeneration strategic value actions, by building continuous public space systems – waterfronts + ecological structures + cycle paths... Existent potential may be further developed as an opportunity to diversify “typical” waterfront public space initiatives, with productive and social uses integrated with multiple mobility systems.

LMA multipurpose waterfront spaces illustrate the potential of public space sharing systems, to address issues on how population's basic needs and expectations may be met. This means there is a consistent systemic potential, needing to be assessed and fostered, so as to enable spatial and functional interaction.

The Mapping of Meaning and Conflict As Hybrid Memory Streets

Place naming means memory identification, values and perspectives that may come into conflict as an object of ideological, political and social discord. In this sense, a dichotomous debate about place names legitimation/un-legitimation with different meaning perspectives, can integrate the idea that discord values are positive, if they are able to articulate inconclusive political debates (Dolff-Bonekämper 2003). Starting from

the fact that in democratic deliberation, disagreement and even decision postponement are part of a political process allowing public opinion to take positions about conflicts based upon street names.

Toponymy is a complex cognitive cartography (Jameson 2009). Since its first regulations in 19th century it develops as an urban readability organization management with historic links to major political and cultural social transformations (Vidal et al. 2005). This cartography is centered on public space management, at two levels:

- One of long duration and stability, based on the physical typology of place (hardware): street, square, avenue, bridge, road, as well as in its dimension of memory and meaning (software);
- The other - more unstable - on a commemorative level, subjected to strong tensions between different meanings of cultural, historical and political values.

Violence of naming things with concepts that, per se, exclude other ideas about the world (Žižek 2008) adds to the power of ideological attributes, the configuration of mental maps rooted in values, as part of public space conflicts.

A new gender perspective reading, on the study of "Catalonia Nomenclator" (Parella 2008), places women referents in almost negligible positions. In less than a decade, the same Institute that published the work, now creates the "Catalonia Nomenclator of streets with the name of a woman", a digital tool of collaborative nature, which allows municipalities, and everyone who has an interest, to identify Catalonia streets that have the name of a woman and to increase the number of streets dedicated women."

170 years ago, Víctor Balaguer proposal for "new Barcelona" streets' names, was justified as "remedying forgetness", the "oblivion in which, due to bad luck, certain glorious enterprises have fallen, certain famous names have been and will always be a glory for Catalonia" (In Fabre & Huertas 1982). So the most important city's nomenclator, was born culturally and ideologically rooted in Catalonia history.

In cities such as Barcelona, it's still the small passages and interior gardens (Fig.7) of Ensanche that have most been given women names. In the current claims linked to the visibility of gender and memory lies the critique of the city's different toponymy layers' models. The strength of such a transversal movement has consequences in municipal policies. Links of women with places that commemorate them, are direct, and in other cases, names are part of feminist genealogical imaginaries with cultural relevance but with no memories dimension.

Gender perspective in municipal policies is not exempt from conflict. Public space, understood as an "operations theater" for imaginary configurations, resistances and political claims linked to social movements (IS 1958), must relate to very diverse dimensions, among which, reflection on its emptiness.



Figure 7: Public actions related to visibility of gender and memory. (Source: N. Ricart)

FINDINGS, QUESTIONS AND CONCLUSIONS

The fact may be discussed: mustn't we now search for conceptual and methodologic new tools, to cope with new roles and meanings expected from new types of public space, not disregarding new kinds of space services and meaning values?

Within variable circumstances, classic lexicon (road, street, square, park...) may now include other types by sharing or layering services? New concepts regrouping, generic or specific space typologies, may even include no-named places. Expanding public space notion to a systemic idea, we are enhancing its interaction potential: as an infrastructural, landscape and communication system. A public space system intersects and complements all other, in a mutually reinforcing way. "... Streets are no more juxtapositions of functions, than cities are collections of villages" and public space governance is the "finding of acceptable balance between sharing as division and sharing as common ownership" Ascher and Muller (2007).

Altogether – public space as a support and interaction of identity capacities, a mobility and activity facilitator, a landscape promoter and sustainable ecology – may be assessed as a service system, for its benefits and citizenship values.

ACKNOWLEDGEMENTS

Authors gratefully acknowledge the support of Fundação para a Ciência e a Tecnologia (FCT) under the research project PTDC/ECM- URB/2162/2014 Portugal, and Ministerio de Industria, Economía y Competitividad under the research project HAR2017-84322-P "Arte público y memoria. Desarrollos para el programa de intervención en la red de espacios de represión franquista en Barcelona", Spain.

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