ABSTRACT

The urban development processes result from a mixture of town-planning coordination and a real-estate private investment, strategies that are not always articulated. These two strategies have two different decision makers, one is based on institutional policy and another relies on individual initiative driven by financial interest and market pressure. Until the nineteenth century the supremacy of individual initiative was more expressive. The nineteenth century represents a profound change in the urban development and urbanization’s processes, for the emergence of town-planning, as an administratively integrated autonomous disciplinary field.

Porto is a national example of this change that took place mainly in the late nineteenth century, but with a historical background in the eighteenth century with the two major Portuguese Enlightenment initiatives in this city and in Lisbon.

Porto Municipality promoted a city civic center restructuration between 1880 and 1920, with a urban program of administrative, financial, communications and legal services centralities.

As a parallel mechanism of urbanization and the creation of centrality, we witness a real-estate market process of the west part of the city, whose core, Praça da Boavista, is a part of a urban axis of nearly seven miles that guides all urban development towards the ocean.

This communication establishes a basis for comparison between the processes of urbanization of the Avenida dos Aliados area and Boavista Axis, inserting them in a dual centrality system that still characterizes today the city of Oporto.

THE URBAN BASE - THREE DEVELOPMENT PHASES

The city of Porto is located on the Northwest coast of Portugal, near the Douro river mouth, taking advantage of good natural conditions for the establishment of a port, very well protected and guarded.

This was a decisive factor for the development of the city as the main Atlantic gateway to the regional exchange of all the wealth of the Iberian watershed of the Douro River. The appropriation of the main topographic prominences on the north
side deployed the territorial bases of the urban settlement since pre-Roman times, but was only the creation and political affirmation of the Portuguese kingdom (XII century) that allows the city structuration as a permanent physical and institutional unit - the walled city around the cathedral, seat of Episcopal power, that occupied the main topographic elevation and the highest vertical slope in relation to the river (Tavares, 1996).

Since then, the city and the river were two physical forces of the same territory, deeply articulated in historical alignments that support its economic and cultural roots in this specific harbor function. Its development over more than thousand years, merged both entities in a single unit, integrating the Douro River at the base of all major urban events, whether economic or cultural - is along the river, with the river and on the river that the movement of people and goods is animated and intensified, until mid-twentieth century.

Historically, the city dominates communications between coast and interior, between the North and South.

Until the end of the seventeenth century Porto urban sprawl remains contained within city walls and immediately adjacent to the upper level main exits (a trident that corresponds to the three main axes of articulation with the North, coast and interior: that is, the connections to the cities of Póvoa, Braga and Guimarães) (Real & Tavares, 1987)

At the lower level, parallel to the river, there is another axis that makes the articulations to the sea and is punctuated with clusters of harbor activities, fishing, and shipbuilding.

From the second half eighteenth century (and as a direct result of Marquês de Pombal reconstruction of Lisbon) the global planning was introduced in Oporto through a program for the opening and construction of major urban axis; it was called “1784 Improvement Plan”. This is an administrative initiative of the central government extension with links to specific local entities (the municipality and the main economic organizations related to the exploitation and trade of the port wine).

To articulate initiatives and institutional relations was established in 1763 the Junta de Obras Públicas [Board of Public Works], led by the Oporto Governor of Weapons, João de Almada e Melo, a cousin of Marquês de Pombal (Mandroux-França, 1984).

The set of public works promoted by the Junta is based on two very clear objectives: promoting functional adequacy of public circulation spaces and control the aesthetic quality of new buildings. These actions were implemented in two fronts, in the mediaeval center and in the expansion zone outside the city walls.

This illuminist plan of transformation and expansion of the city is based on a axis of north-south articulation, which connects the downtown old Ribeira square with the new Santo Ovídio square, in the extreme north of the city (Santo Ovídio Square was designed as a field for military exercises) (Fig. 1). This plan also requires the adjustment and replacement of old routes, and includes hygienic measures, functional conversion of existing tissue, and promotes a program of public buildings that mark this city’s image renewal (Tavares, Nonell & Domingues, 1994).
In this Plan (1784) was included the beginning of second important axis of articulation to the coast, complementary to the north-south axis. The designated Rua Nova da Boa Vista [new street of the good view] starts at the top of the military square of Santo Ovídio and is oriented towards the 17th century fortress of S. Francisco Xavier, taking advantage of its excellent topographical situation that allows a clear line of sight to controls the Atlantic coast.

Was this westwards axis, with almost 7 km on straight line, which guided urban development throughout the nineteenth and mid 20th century, also defining the northern boundary of the urban area of greater density. Its construction was developed throughout the 19th century, but only reaches the sea in the second decade of the 20th century. This urban alignment formed by the Rua and the Avenida da Boavista, was opened in four main phases, between 1784 and 1917. In its alignment towards the sea it cuts the main radial articulation axis with the North, coast and interior.
In result of this Illuminist plan were defined the foundations of a new city, regular in all its extension, polarized in the far north by the new military square and in the extreme south, along the walls, by the new Municipal Square, where, in 1819, was installed the Municipal Palace. This square, known as Praça Nova [New Square] and built after 1718, located in the main north exit from the walled, and was established as the administrative city center, since 1819. It became a representative and symbolic center of power with its monumentalization in 1864, with the construction of the equestrian statue of King D. Pedro IV (Fig. 2). This was Oporto first monumentalization of an urban space and the municipal power paid homage to the king’s action at the siege of the city (liberal’s wars) and the act of giving his heart to the city of Porto. Since then this space has established itself as the city urban and political center, congregating throughout the 19th century the main civic functions: administrative, social, financial, communication and transports.

At the turn of the 19th to the 20th century the terminus railway station was added to this center (in 1900, the inaugural year of its construction), replacing an important testimony of religious architecture (former Benedictine female convent) by a functional civil unit, centralizing railroads of regional and national levels of articulation. This civil appropriation of the city center gained its major expression during the republican government (which replaced the monarchy by the revolutionary act of October 5, 1910) with an emphasis on strengthening local and municipal administrative bases. Was inserted in this conjuncture the commissioning of a new plan for the entire civic center in 1915, the British architect Barry Parker, which was built after 1917, the same year in which the opening of the axis of Boavista to the sea was completed (Tavares, 1985-1986).
THE LEVEL OF CONTEMPORARY - DUAL CENTRALITY

In the opening of the urban contemporary, Oporto bases its entire development on the affirmation of a centrality (administrative, economic and financial). A regional centrality (all the north of Portugal) that constitutes itself as a model of urbanity in counterpoint to Lisbon. Oporto has established itself as the northern regional capital, implementing the levels of urban structure that draws the main spatial and functional aspects typical of European cities - spatial and functional regulations, establishment of an urban transport network, creating a network of domestic water supply, a network of housing sanitation, the modernization of the entire port infrastructure in the interaction between the river and maritime ports, the creation of a network of markets for daily food supply, a network of public health and fire prevention/fighting, the public control and standardization of the first units of affordable housing for the working population.

These urban policies developed by municipal authorities, contributed to the affirmation of an administrative representative prestige and, again, were opposed to the power of the National Republic. In urban spatial terms, this meant an action spread through the city, but functionally clustering activities. These functional clusters deployed throughout the 19th century defined a network of articulation and transport, raising the need for a road structure that articulates the entire space of the city, setting the levels of a functional hierarchy, internal and external.

This hierarchization was based on the definition of an urban structure that for the first time, drew a framework that demarks an urban and architectural centrality (a new Civic Center) clearly opposed to a peripheral environment. This Civic Center brought together the main administrative activities (Town Hall), financial (central bank, finance companies, credit houses), communication (telegraph and postal services, the central railway station, main relay of urban transport), leisure (cafes, gaming salons, recreation societies) (Tavares, 2004).

This space monumentalization in 1864 strengthened its architectural representation, but still lacked a setting of greatness, dignity and international alignment with what has been designed for all the major European city centers. The Paris model guided the designs of central renewal of all the capitals of continental Europe, as a symbol of iconic modernization. Oporto, in particular, has always been closer to the British cultural models, mercy of the strong influence of British colony rooted in the city since the 18th century (production and trade of port wine). Thus, the neoclassical language was dominant in its monumental architecture, especially by a direct influence of the architect of York, John Carr, who draws one of the most iconic and imposing buildings of the city - the Great Hospital of Sto. Antonio.

When the problem of a necessary and indispensable renewal of the whole downtown area was placed (especially required by the recognized inadequacy of Town Hall), in the late 19th century and during the monarchy, English reference dominates the options.

The change of political order, violently imposed by the republican revolution (1910), gave rise to the local municipal power, structured around the municipal administrations. Oporto had an important role in the new national policy framework, leading the takeover of the municipal administration by the Republican List, three years before the Republican Revolution (1907). Indeed, when the Republican
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regime was imposed, Oporto made a quick and quiet administrative adjustment, immediately implementing a series of acts of urban policies and spatial recomposition that were already in action in previous years, but were blocked or were inappropriate to the new cultural settings.

This was the city center restructuration case with a program to create a new Civic Center, modern in its principles, to the new functional programs for the affirmation of an administrative, financial, communications and legal services centrality.

The initial plan was drawn by the municipality staff but the local government decided to invite a foreign recognized professional with competence in town-planning to follow the decision process. Barry Parker, English architect and the 2nd figure of the movement of Town-Planning/Garden-Cities (partner of Raymond Unwin, the 1st
figure of this movement) was invited to give technical advice on the proposal. However, as a result of this discussion, he was immediately hired to develop his own plan for the Civic Center of Porto. This plan is developed between 1915 and 1916, approved in 1917 and implemented throughout the 20s (Fig. 3).

In this process there was a debate that, respecting the urban plan, changed the architectural definition of the entire Civic Center, following the influence of the French Beaux-Arts architecture replacing the architectural language proposed by Barry Parker closer to the neoclassical influence. The development plan set for its central sector a grand square-avenue, with porticos on its side wings that seeks to discipline and renew all articulations in the central area, especially with the Cathedral historic area, creating a new south entrance, through the Luís I road bridge (1886).

The operation retained only D. Pedro IV statue that monumentalized the space, expropriating and destroying the entire old urban and architectonic structure. Its composition was supported on a symmetry axis that bound the statue and the central tower of the new town hall building, which occupied the north end of the whole complex. The remaining buildings, as proposed by the plan, were a grandiose symmetrical composition, attributed to the private sector, which had, as functional program, offices and shops distributed in an orderly sequence of 3 floors architectural units.

The new center construction was completely controlled by the municipal administration, both in the construction of the town hall building itself both in defining the dominant architectural language. For this purpose it was created a specific regulation, applied only to the Civic Center, in which was determined the structure, materials, composition and program of all buildings. Adjusted for this regulation was established a special award for architecture in this area (Prémio
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Cidade do Porto [Oporto City Prize]), which would be assigned to the building that best fulfilled the distinction and monumentalization of the new Civic Center.

Figure 5 – Implementation of the new Civic Center Plan (1980, left, aerial view) and the Boavista Roundabout (Teles Ferreira 1892, top right, 1980, bottom right aerial view).

The first buildings, initiative of the banking houses, insurance companies and newspapers, were built during the 20s and 30s, but the central zone only appears defined as a complete urban reality in 50s (completion of the Town Hall) (Fig. 4).

It's in the end of this decade, more precisely in 1957, that began an important phase of city planning, coordinated by the French architect Robert Auzelle, and that was implemented in the Municipal Master Plan, presented in 1962. This plan envisaged the creation of a new southern entrance to the city, localized on the west side, by building a new road bridge (Ponte da Arrábida [Arrábida Bridge]). This urban fact that was accomplished in 60s, will help to stimulate the development of a new center in Boavista's area, affirmed by the penetration of urban road traffic which strengthens the existing regional railroad articulation to the north coast (West Station - built in 1872) as well as the articulations established by domestic urban transport (Garage of American trams - 1875).

This concentration of transport units, established in the 19th century, determines a urban spatial unit (built between 1866-1892) that was configured on the French model of the large roundabout (Eugène Hénard) disciplining all the radial
movements and creating a circular urban space (Dethier & Guiheux, 1994), that was gardened and monumentalized with a monument/obelisk - Peninsular War memorial, in 1909 (Fig. 8) (Magalhães, 2010). To this transports and communications centrality was added a leisure unit (Bullfight ring - 1870) (Fig. 5).

But it was the 20th century, following the Arrábida Bridge construction (1962) that opened the second and decisive phase for the urban and functional characterization of this west centrality; this area had become an expansive zone for commerce and services, with the construction of a new general daily market (Mercado do Bom Sucesso - 1954/56) and the installation of the first shopping center in the city (Brasília shopping center - 1974).

In this period of the city urban restructuring, was thus revealed a mechanism of urbanization and the creation of centrality, parallel to the above, developing a real-estate market process/program of the west part of the city, reinforcing the economic value of land near the coastal alignments (river mouth and Ocean).

This centrality was reinforced in the 21st century by the construction of one of the most iconic buildings in the city, the Casa da Música, designed by architect Rem Koolhaas (1999-2005).
DOUBLE INITIATIVE – URBAN PLANNING / URBAN REAL-ESTATE

The two most important Oporto urban centralities result from two distinct processes of urbanization. This distinction is based on two distinct socio-economic initiatives that determine two opposite strategies of urban development. We can isolate the different processes of urbanization isolating the two initiatives that underpin the implementation of major urban projects - public initiative (based on a urban planning framework) or the private sector (based on a real estate investment framework).

This initiative, responsible for real estate development, has a first intentional manifestation in the Boavista Axis early in the 19th century, in 1833, when “several interested citizens recognized as a major advantage of public and private the continuation westward of the Boavista Street, at least until crossing with Estrada de Matosinhos” (Nonell, 2002, 353).

![Oporto Regulatory Plan. Giovanni Muzio, 1939/1943.](image)

Figure 7 – Oporto Regulatory Plan. Giovanni Muzio, 1939/1943. [Tavares, Nonell & Domingues “Oporto”, 1994, pp.145].

The 19th century was, for the major countries of central and northern Europe, the century of the emergence of urban planning as a technical discipline (architecture and engineering) and as a socio-economic discipline (political and administrative management).

In Portugal, this autonomous disciplinary framework is late; although it has established still in 1864 the first law-plan for urban development (restricted to the cities of Lisbon and Porto), it does not set the technical or political basis for urban planning. Even the creation of the Ministry of Public Works (1852) was not sufficient to impose the principles of territorial and urban planning. The political change from monarchy to republic (1910) put in the municipal autonomy frameworks the strategic bases of urban development, but this does not meant that possessed the technical capacity to perform. With exception of the two largest urban centers (Lisbon and Oporto), there were no architecture and planning technical services in most Portuguese cities.
However, the Oporto administrative municipal management concerns about development recognize the importance of planning in the city modernization. It is frequent the recurs of international examples study and the invitation of international experts to participate in specific initiatives planned for redevelopment (Fig. 7). Similarly, the Portuguese technicians, architects and engineers, are integrated into this dynamic, by participation in international events and political and technical discussion forum. The municipality of Porto itself is being represented by their technicians in some of these international conferences (Tavares & Vale, 2010).


Figure 8 – Rotunda da Boavista aerial view. Clara Pimenta do Vale, 2008. The Peninsular War memorial. [Vale. “Um alinhamento urbano…”, 2011, p.252].

This municipal dimension in the administrative and technical control of urban development has the benefit of proximity as a consequence, but also the efficiency of urban management spatial, and especially the development and implementation of plans-project for the redevelopment of certain areas [which Aymonino (1984) designates as projects globally constituted]. That’s what happened in the Barry Parker Plan for the Civic Center, who develops a comprehensive blueprint for the entire old central area, from its urban base to its architectural detail and spatial characterization.

This technical condition lasted only in the political cycle corresponding to a democratic republic, in which was dominant the tendency for local and municipal powers. The policy change due to the military coup d’état (1926) which opens conditions for the establishment of a totalitarian regime (constituted in 1933) leads to a radical inversion in the panorama of urban environment. The political centralization that emerges from the Ministry of Public Works rehabilitation, is the creation of the Urbanization Plans by an 1934 law, now coordinated by the central administrative authority (Fig. 7). The immediate consequence, though they were imposed on almost all the urban centers, is that these plan rarely become effective; much less they were presented as detailing-plan-project. Thus, the panorama presented in 30s of the 20th century to the Portuguese urban centers was that their development was based on strategies conducted, mostly, by private initiative.
The Oporto largest example was precisely the process of urbanization that take place on the centrality of Boavista (extending to the axis that leads to the sea, to the point where it intersects the radial crossing towards the seaport and airport). Therefore, the largest investment in this new center was sponsored by private, which were responsible for the axis urban consolidation, a real estate investment process in successive cycles. These cycles of urbanization determine changes in typology, architectural image and height of buildings. Among the most significant examples of such private investment, enriching Boavista axis as a residential artery, and defining a typology of picturesque vacation villas, were the palaces built in the late 10s and 20s (Vale & Abrantes, 2010).

From the 30s, the socio-economic groups to which the developments are intended are noticeably lower compared to the detached houses of previous decades, either in the building image, and either in building areas, lots, and deployments. If we look at the buildings built in this decade, along the Avenida da Boavista, these correspond to an individual or detached dwelling, but affordable in costs (Vale & Abrantes, 2012).

From the 40s, this artery urbanization becomes more ‘bouncy’, focuses on individual operations of allotment of old farms.

The 60s are influenced by two facts of a different nature, but that have a direct reflection in space: the promulgation of the decree on the horizontal property in 1955, and the opening of the Arrábida Bridge in 1963. Again, the allotment operations are focused on old farms and manufacturing facilities disused giving rise to large real-estate projects, as the William Graham residential project, built by the company of the same name over the course of two decades. It involved the development of lands previously owned by the Fábrica da Boavista [Boavista Factory], a textile business founded in 1889 by the Graham family of port wine fame. This was the most important development in this part of the city, and also the largest in terms of area, built to high quality standards (Fig. 9) (Vale, 2011).
This possibility of large scale real estate investment derives from the fact that the entire west part of the city is mostly made up of parcels of significant size, which facilitates concerted urban operations (by a joint construction of buildings or merely by the division a particular street front in lots of constant dimensions).

The urban fabric of the Avenida da Boavista (Fig. 10) will be changing from that time on in a much more sensitive way. The scale of the projects will grow and its number too. The real estate operations for demolition of existing buildings and build new higher ones are increasing in the areas closer to the Rotunda da Boavista and in the Rotunda itself.


The 80s present a phase of renewal of this centrality, reinforced by the investment which relates to the Oporto metropolitan role. As head of this area, the city polarizes all international relations through the most important centers - the port of Leixões, the airport, the TIR. This dynamic role of the entire metropolitan area is reflected particularly in the Boavista centrality, reinforced by the establishment of units that represent the high standards of tertiary activities, whether financial companies, large international hotel chains, luxury shopping and advanced services (Fig. 11).

As part of greater symbolism of this international polarity, focused on Boavista, one must recognize the construction of a real architectural diamond that, in the 21st century, crowns the Program of the European Capital of Culture awarded to the city of Porto in 2001 - Casa da Musica of Rem Koolhaas (Fig. 12).
Figure 11 – Oporto aerial view. Clara Pimenta do Vale, 2008. The Douro River, the two sides and the two cities (Porto and Vila Nova de Gaia) and the rail and road bridges that link the territories (from north to south of country). [Vale. “Um alinhamento urbano…”, 2011, p.167].

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