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URBAN AND ARCHITECTURAL RECONFIGURATION IN THE OPENING TO MODERNITY - THE CONSTRUCTION OF THE CITY OF OPORTO (PORTUGAL) BETWEEN THE INFLUENCE OF BEAUX-ARTS AND THE MODERN MOVEMENT

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ABSTRACT

The nineteenth-century's urban life, based on economic and political liberalism, required a profound re-functionalization of the city that transformed the structure and architecture of the urban space. At the turning of 1900, these changes radicalized, when associated with the radical changes in the political order, until the period between the wars, with the successive changes in the political reality from monarchy to republic, from democracy to dictatorship. The case of Oporto (Portugal) permits to evaluate these urban transformations for that period, in which the municipal politic changes from constitutional monarchy to democratic republic and to dictatorship, setting the urban and architectural public projects to the new ideas and cultural purposes, adjusting images and the architectural vocabulary. The introduction of new building systems and the use of the new materials were driven by the public works, national or municipal, or by the building construction of citizen or professional associations. New images for new buildings, designed for the new public functions, which should be representative of the new ideals and new political agendas, opened an urban transformation that was structured between the centers of communication and administration and peripheral areas of socially demarcated residence. The use of new materials, particularly reinforced concrete structures appears, initially, with municipal regulations to address issues of fire safety. Specially applied to public architecture, these measures were extended to the private construction despite opposition and resistance from the owners and architects. The construction materials and systems transformation process, due to the lines of cultural and architecture modernity was slow as the common construction, in particular residential programs, individual or collective, maintained the use of systems and materials rooted in the constructive tradition. Thus, it is possible to follow an alignment of the architecture of public nature, between the images of the "beaux arts" and modernists, between traditional construction and new structural demands and possibilities allowed by the new construction materials.

1. PRINCIPAL CHANGES IN POLITICAL AND URBAN ORDERS

Portugal has undergone profound changes in the first half of the nineteenth century that radically transformed its political structures, its economic and social hierarchy and all of its territory and cities administrative system. This transformation had opened a political and economic liberal cycle, in a constitutional and democratic sense, which would also result in a formal change of architecture and urban space. This cycle, lasted throughout the remaining years of monarchy until the establishment of the republican regime (1910). It was only interrupted by the military revolution (1926) and the radical politic changes imposed by the dictatorship (1933).

The Liberal Revolution (1820), following the ideological principles of French Revolution (1789) and European movement, was initiated in Oporto, and was the political event directly responsible for this mutation, that alters the religious basis of the Portuguese cultural and social structure by imposing a civil ordinance which effectively changes the administrative structures. From then on, the king's role was considered secondary and is a democratic parliament, the place of political and social confrontation, which determines all policy development, setting out key objectives, priorities and the means to persecute them. The main political objective was the abolishment of antique privileges of the Ancient Regime (that were against the equality among all men). They immediately extinguishing the male religious orders and nationalizing their assets that will be later partially re-appropriated by the government and social institutions.

In Oporto, these new concerns and civil order requires a new urban strategy implying a re-functionalization that changes urban references, architectural structures and the image of the city. The civil appropriation of many religious buildings, for example; - the Royal Public Library and Museum Hall (1839) occupied the former convent of Saint Anthony (*Convento de Santo António*) - the municipal cemetery (1838) was settled in the gardens of Episcopal summer residence - the Angel Municipal Public Market (1839) uses the space of the ancient religious building of the "*Recolhimento*" - the Chamber of Commerce Trade Headquarters (1833/1840) occupied the former convent of S. *Francisco*, with several transformations. Convent churches were maintained for parochial use.

Given these changes, in the second half of the nineteenth century and after the normalization of political life (Constitutional Government of *Regeneração*, 1851), Portugal was a country with an evolving social organization, attempting to free itself from the medieval heritage and introducing the components of Continental European Modernity. The municipal governments, especially the ones of the two largest cities (Lisbon and Oporto), with more or less autonomy, enact legislation and start works towards this aim of urban modernization, with the implementation of several infrastructure; street paving, rain drainage, sanitation, water supply, public lighting, and several improving in the city design, with the beautification and cleanliness of public space. The important question that arises at this time is an idea of public and social good, with comfort and safety of urban life.

The ways to development of industrial capitalism and private investment were opened by state intervention in the infrastructure network, giving priority to land and sea routes and the retrofitting of traditional ports. The creation of Public Works

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Ministry (1852) centralizes the government administrative action for the major projects, in the communications infrastructure, as routes, railroads, terrestrial mail, and specially with the construction of major port infrastructure, which had direct consequences on the urban restructuring of the main cities (Lisbon and Oporto). The priority was the local links with the maritime areas and industrial development zones - the most important expression in the city of Oporto is the redevelopment of the north river side area, with construction of the New Customs Building (begun in 1860); the further opening of the long axis of the spatial expansion towards West of the city and the sea (*Avenida da Boavista*, 1854) and the crossings of the River Douro which connects the city with the South of the country and its capital, Lisbon (railway in 1877 and road in 1880).

To organize this policy of territorial and urban public works, the new ministry created a technical department, centralized in a body of engineering, whose training and action was inspired by the French urban planning politics. This influence is evident in the obligation to prepare "general improvement plans" for the two major cities (Lisbon and Oporto), enacted in 1864/1865. This planning was understood as a strategic tool for changing the traditional alignment of urban society, changing references and introducing formal and functional aspects of urban modernity. The immediate preparation of these plans was compromised by the lack of updated scientific urban mapping of the two cities. Cartographic works began precisely at that time and, in Oporto, they would result in a city complete mapping, in 1/500 scale, and referenced to year 1892.

This legal obligation to start planning and urban improvements didn't had the immediate planned consequences, but give the starting to a group of legislation to regulate the essential levels of safety, health and comfort of urban living that would mark the entire architecture and built structures, public and private, between the latter years of the nineteenth century and the first half of the twentieth century.

The city of Oporto made a major investment on modernizing the city, trying to insert itself in the context of contemporary European countries, in matters of civil administration and urban policy. The city collects the ancient postures and regulations, spread along several edicts, coordinating the development of a new code of postures, promulgated in 1855. This urban code was the first that actually correspond to a systematic and organized effort to provide the city with a legislative framework that governs the use of public spaces, the health and safety of the general population as well as the licensing of private construction, which primarily must comply with public use issues and public image of the city. For its preparation was mentioned the consultation, for reference, not only of other Portuguese cities codes, but also the law of the municipal police of some of the most important cities in Europe. These legal positions anticipated in several years the own national legislation (1864).

In 1903, the national government published the General Regulation of Urban Health, the first national regulation effectively applied to building construction, and eventually it served as a reference to the law of the Portuguese municipalities, such as Oporto, for the reformations of its own Urban Codes.

Throughout the second half of the nineteenth century, the city of Oporto increases its population in an accelerated growth rate (2000 inhabitants/year), doubling the urban population between 1864 and 1911. This urban growth worsens the problems

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of infra-structure and the enormous needs in terms of housing, creating an uncontrolled concentration and densification within the existing urban fabric. Issues of public health and urban wellbeing become extreme.

Although some isolated earlier actions, concerning supply and sanitation, the water supply network to private homes was contracted only in 1873 and renovated in 1882 increased the possibility of the supply to the higher areas of the city (Oporto has a rugged topography). The sewerage network only begins to be systematically installed in 1896 by the English firm Hughes & Lancaster, but technical difficulties slows down the process, and the system only enters in operations in 1927, but in 1934 still only serves a very small part (1178) of all buildings covered (25 000).

The city shows then a development of two rhythms with rates of functional and urban specialization; - an extensive presence of industrial activities and setting of the working class, which consolidate the restructuring of the urban periphery; - the strengthening of specific activities related to financial sector setting out in the city centre and the urgency of accelerating urban regeneration and heritage of the downtown area.

The problem of differentiation and specialization of urban space arises, between the main centre and other centres of functional specialization. This makes visible the need to equate, as an important priority, the renewal and updating of the central areas, using new architectures for new urban programs of community service, creating the bases for a great social and political representation.

Since the eighties of the nineteenth century, that this dynamic had been creating urban happenings that promptly reconverted the physical structure of the city. One of the most significant and with more permanent consequences was the creation of a centre of communications services, with the project to extend the railroad to the city centre, building a Central Station (*São Bento* 1900/1909) [Fig. 4]. This central station was articulated with the Oporto peripheral Eastern Station (*Campanhã*, working since 1877). Along with the problems of communication and accessibility to the centre, the discussion on other functions of a higher level urban nature is also open, taking into account the municipal government, and those ideas would also affect the inner city and create a functional dynamic restructuration, urban and architectural. In this case, it is among the most symbolic entities in respect of social policy and urban life, following the model of European modernity, that the city will find it's key points to the new re-functioning and restructuration; - on one hand, the architectural unity that represents the municipal government and that will take shape as a factor more representative of urban centrality - the Town Hall; on the other hand, the units that make up the policy of supply of foodstuffs, restructuring its urban distribution and creating a central unit - the Central Market *Bolhão*. These buildings along with other punctual interventions, claims to be able to introduce modern architecture that already guided the reform of urban centres in major European Capitals.

At the same time, the municipal administration and urban management creates regulatory mechanisms to control the private sector actions on the urban space and promotes public programs for the conversion of the most pressured areas by this dynamic economy. It aims to create more favourable physical conditions, more suitable spaces, more appropriate to the new functional programs, more hygienic and better quality of urban life. Above all, more connected with the spirit and the

image of a democratic power, popular, socially just, already obeying the New Republican Political Order that will be introduced in 1910. The intention is to start a new cycle of urban development that, politically, is based on municipal capacity to plan and implement urban actions, autonomous from central government, and to ensure a regional affirmation of the city in economic and cultural levels.

2. NEW URBAN CENTRE – THE NEW ARCHITECTURE BETWEEN BEAUX-ARTS AND MODERNISM

In the opening to the twentieth century, between 1890 and 1900, the city of Oporto imposes itself as an important national financial centre, due to the increasing number of banking and insurance companies, whose headquarters tended to be settled preferentially in the new central area, polarized in nineteenth-century's main square (*Praça de Dom Pedro*). The new functions were brought to this area, as a centre of urban life, due to the confluence of urban transportation service, in connection with national railroads, facilitated by the opening of the central station of *S. Bento* (1909). This renewed functional change accompanying the financial and banking activity was helped and sustained by the installation of large warehouses, shops of luxury goods, large lounge with gaming cafés, hotels and pensions, and many major law firms and other services. These economic events give the new centre location an exceptional value that motivates municipal political ambition in the renewal and creation of a civic centre, modern and monumental. Initial thoughts are still based on a program of road renovation and reducing unhealthy spaces, in a typology of avenue-boulevard, but the new Municipal Republican Government promotes an operation of great prestige and affirmation of the representative status of its administrative functions, whose plan was commissioned, in 1915, to the British architect Barry Parker (1867-1947). [fig.1]

The program for the new plan was to "... *open and expand part of town that is very congested, open a wide avenue that should be, above all, very dignified, destroy some spaces of downtown city and create a true civic centre and a centre of establishments*" (Tavares, 1985/86, 2004).

Parker's plan restructures all access to the central area, develop global projects of urban design and architecture of all buildings of the central axial, or those intended for the administrative programs (complex of the new City Hall) or the new commercial programs (hotels, department stores, great cafes with game room), designing architectures inspired by the image of neoclassical architecture in the existing local and British models.

The municipal government conditions to implement the plan place priority in its core (*Avenida dos Aliados* - the representative Main Square), which punctuates the municipal administrative complex (City Hall) and dominates the composition axis, and restricted the municipal action to urban space, leaving to private actors the freedom of the buildings that will complement the whole set – but this interventions should follow the rules of "Architectural Award of Oporto City Hall", created especially for the central zone of the *Avenida dos Aliados*. This leads to the replacement of architectural image of Parker's plan by the new reference architecture of Beaux-arts, designed by leading Oporto architects who had supplementary architectural formation in Paris, already working in architectural

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projects, which highlight Marques da Silva (1869-1947) and Correia da Silva (1880-?).

In the new urban cultural conception that image is considered more prestigious because it is closer to models of continental European cities. Therefore, the neoclassical image proposed by Barry Parker, who drew inspiration from the dominant urban architecture in Oporto until the early twentieth century, eventually had being replaced by the Beaux-arts model which, in its turn, dominates most of the buildings of the City new Civic Centre.

The importance of the "Architectural Award of Oporto City Hall" is decisive in the consolidation by the end of the thirties, of a representative image, institutional and somehow linked to the French influence of the Beaux-arts (as opposed the image of the modern movement that began to emerge in Western Europe and Central). Moreover "to architect with foreign educational background, familiar with the new construction techniques, will be commissioned the State projects" (Fernandez, 1988). They will also have an important role with the municipal commissioning, mainly in the case of buildings with representative status in the city, as the case may be with the more emblematic and dominant of the urban centre, the Town Hall (1917/1919), [fig.2] result of an architectural contest won by the municipal architect Correia da Silva. This project respects Parker's ideas of location, asserting its monumentality. In the same way, other municipal buildings, can be stand out for it's contribution to the plan of city centre renewal, and also representative of the new architectural language – for instance, the Main Central Market of *Bolhão* (1914) [fig.3], also designed by Correia da Silva.

The operation of architectural and urban renewal, dominated by major municipal buildings, is counterpoint by private initiative of socio-cultural associations, through the recent construction of monumental buildings and renovated or completed rebuilt ones. These altogether also contributes to the image change in the central area since most projects are by Marques da Silva, another architect trained in Paris. Besides the *Teatro S. João* (1909), located on the eastern fringes of the reform plan of the centre, are from it's design two of the most paradigmatic private corporate buildings of the new centre – the Headquarters of The National Insurance (1919) and English Bank (1922) [Fig.5] - that define, together with the vertex of municipal Town Hall, the new urbanity monumental, with a strong French influence in the decoration and vocabulary Beaux-arts.

The choice of these architects, formed mainly by the "École de Beaux-arts de Paris", puts them in touch with European new styles, but this experience abroad also led them to take a more extensive and direct contact with the new "modern" programs and new building materials that were not used in Portugal, or were only used in an incipient way. We speak mainly of iron (cast, rolled) and reinforced concrete. In these buildings of the municipal commission, in result of its program, its size but also of the monumentality and representativeness required (which lead to open spaces, of large dimensions), new materials were used and contribute to the final result achieved. These works, which mark the city's in a urban point of view, are also references in terms of constructive methods, allowing other designer and construction workers the possibility to be acquaint with them and to the new forms of execution that had not yet fallen into the public domain in Portugal.

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Just for reference, the first national rule for the concrete's use (*Regulamento para o emprego do betão armado*) was only published in 1918, made on the initiative of the Portuguese Association of Engineers, and later embraced by the government. And for cast iron, or steel buildings, the first regulation is published only in 1965, which meant that all the metal structures that covered large spans were built based on foreign knowledge and standards that were adopted and adapted by national engineers.

The integration of new languages with new materials was evident in the major buildings of the new centre, as true inaugural units of an architectural path. The market *Bolhão* uses a system of reinforced concrete slabs crossed to ensure consoles and the spans required. The sturdy structure of vertical walls continues to use the traditional stone masonry, and will continue to do so for nearly two more decades. But in the exterior facades, concrete was used in decorative elements at the capstone and the cornice. Another case, paradigmatic of the new features, also located in the new civic centre for which were required new solutions and new construction materials, is the building of the garage of journal "*O Comércio do Porto*" (1930) [Fig. 6] designed by the architect Rogério de Azevedo (1898-1984), a disciple of Marques da Silva. The language of modernism is explored here openly, with French and German influences. Programmatically it is also interesting for its mixed functional forms, making coexisting garage, offices and housing. Although cars are circulating in Portugal since the beginning of the century, public garages are a new programme in the late twenty and thirties. Its use new materials and structural forms, like concrete circular ramps.

These architectural and construction features, which were used in more representative public and corporate buildings of the new urban centrality, only very slowly were introduced in the current architecture. The technological difficulties and significant cost increases of the application of new materials were the major difficulties of their use (for instance, reinforced concrete) as an alternative to conventional solutions of stone masonry and wood. The concrete is beginning to be used mainly in private and conventional housing from the end of the twenties, in specific situations and often by direct imposition of the Fire Inspections.

The opening of Portuguese architects to modernity meant that while maintaining the traditional way of building, architectural images adopt influences from the Beaux-arts and Modern Movement, pointing the urbanity of Oporto.

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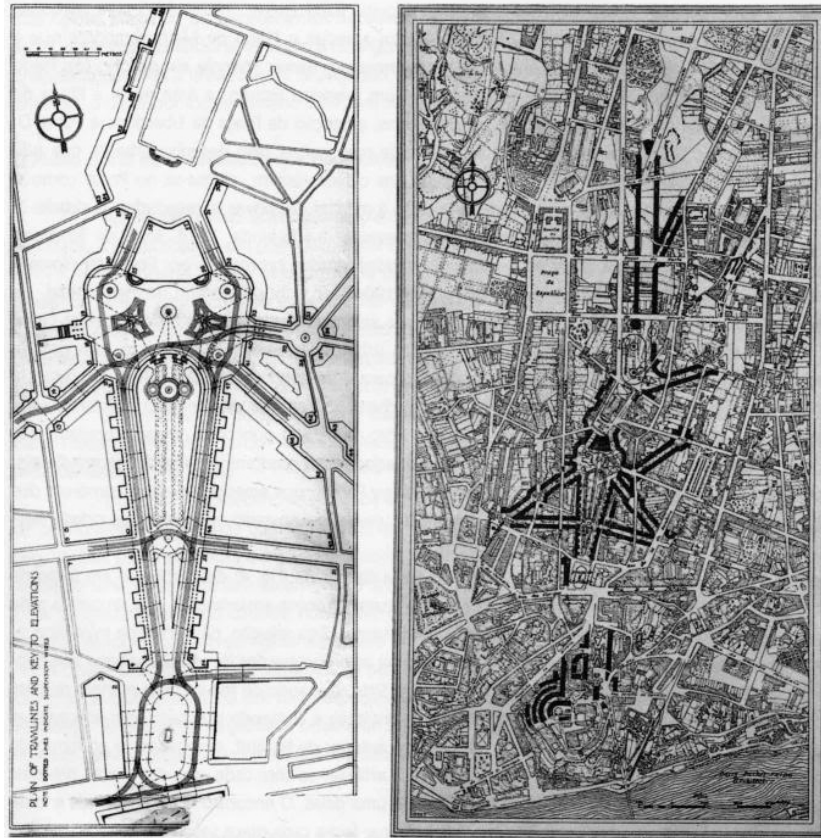


Figure 1 – Barry Parker - General Plan and Central Avenue (detail), 1915

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Figure 2 – Town Hall 1917-1919. Correia da Silva.



Figure 3 – View of Mercado do Bolhão 1914. Correia da Silva

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Figure 4 – Estação de S. Bento 1900-1909.
Marques da Silva



Figure 5 – View of “Avenida dos Aliados”.
Left: A Nacional 1919. Right: Banco Inglês
1922. Marques da Silva

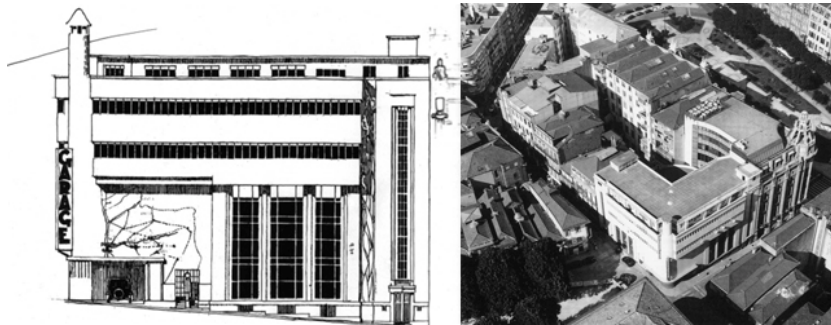


Figure 6 – Garage “O Comércio do Porto” 1930. Rogério de Azevedo