

French Influence on Portuguese Architects in the Age of Enlightenment

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Abstract. This investigation shows the European influence on the work of Portuguese architects of the Enlightenment period. Based on previous studies we focus our attention on the design of "Praça do Comércio" square and on a hypothesis, that it was based on the French Royal Square. We demonstrate that the design of Lisbon from the second half of the eighteenth-century was influenced by the theories and best practices of the time. We also confirm that the architect Eugénio dos Santos e Carvalho, a member of the reconstruction team for the Baixa, had in his personal library several reference books of French architectural practice that certainly influenced his architecture. The plans for the main square of Lisbon's lower city, "Praça do Comércio", can be compared to the "Place de Nos Conquêtes", predecessor of the "Place Vendôme", in its design, architecture and dimensions. This research analysed the cartography and iconography of Lisbon's reconstruction. In particular, the drawings of "Praça do Comércio" and "Place de nos Conquêtes" were exhaustively studied. The comparative study of the elements for both squares lead to the conclusion that the Portuguese square presents many aspects of the French Age of Enlightenment, and in particular those featured in the "Place de nos Conquêtes". This paper concludes that the Portuguese urban design and architectural projects of the 18th century are the result of previous knowledge where it was always possible to articulate the vernacular with academic design, and where many different influences left their mark on the culture of the period. The plans for the lower part of Lisbon display a mixture of references that relate to architectural and urban planning traditions of the Portuguese military engineering and contemporary French urban planning.

1. Introduction

"The Pombaline city centre owes nothing to these earlier constructions; in addition, it can be certain that the architects of the time did not consider them – even if Madel had been exposed to previous practices and experiences from London, Paris and Vienna before settling in the Portuguese court. The truth is that no echo of this hypothetical knowledge resounds in drawings or legislation in Portugal", [1].

"From a morphological and architectural view point, other constructions comparable to those in Lisbon may always be referenced, such as the French examples of Reims, Lyon, Bordeaux, Nancy and Nantes. The truth is that the specific characteristics previously mentioned and the architectural and urban planning traditions of the Portuguese Military Engineering School would have never served as an impediment to acquiring and integrating new experiences and knowledge, to applying concepts from abroad, which were considered both innovative and interesting. There is in fact an international presence in the urban rebuilding process for the lower city (Baixa), which lacks the detailed study needed for a possible application for a World Heritage Site", [2].



The two above quotations are contradictory. Despite knowing that França's (1987) work, especially following the publication of his thesis "Pombaline Lisbon and the Age of Enlightenment", was a driving force to further historical investigations on the city of Lisbon and that the vast majority of Portuguese historians make reference to his studies, it must be challenged his theories with respect to foreign influences in Portugal during the 18th century.

França claims that Portuguese urban planning in the eighteenth century was an original product and disregarded all external influences [1]. Yet for certain researchers such as Muteira [3] and Rossa [4] English influences in Portugal at this time were a given fact. It is Oliveira [5] and Duarte [6] who highlight the issue of French influences.

Murteira [3] defends an investigation based on the theory of an eighteenth-century Lisbon in harmony with other European cities [1]. According to this historian, the eighteenth-century Edinburgh project (1767) was completed based on urban drawings and architectural plans that were, in many ways, similar to the Pombaline project for Lisbon (1756). For Murteira [3] Edinburgh is not the only city which has a similar urban configuration to that of Lisbon. In London, following the 1666 fire, the city administration concerned with the reconstruction of the city established standards for new construction and legal procedures to solve ownership rights. These ideas were, in part, common to those discussed at the time in Lisbon.

Rossa [4] [2] agrees with the theory that foreign influences had a significant impact on Portugal and affected the design of the new eighteenth-century Lisbon. He claims that Lisbon's relationship with Turin and London seems evident. According to Rossa, the planning guidelines were insufficient, at least from an urbanistic view point. There were certain aspects of "architectural nature" which originated from those two cities. The composition/structure of the buildings in Praça do Comércio is proof of this. Rossa reminds us that Manuel da Maia explicitly states in his dissertation that the roads are an actual copy of London's roads and he cites the theories put forth by Laugier [4].

Even though Manuel da Maia in his dissertation laments the fact that he lost his private collection of books in the earthquake, his knowledge of reconstruction in other cities scattered throughout Europe, such as London or even Turin, is evident [7]. In fact, later in his dissertation, Manuel de Maia scorns the works of Turin and London, but then ends up affirming in paragraph 15 of the third section, that the design of London streets serves as a reference. "In fifth place, I offer a drawing of a road that is 60 spans in width, resembling some of the roads in London, divided into three parts, the middle measuring 40 spans in width for carriages and people on horses, and the two sides, each with 10 spans in width, for people who are walking or in wheelchairs, split with pillars and pavements making the separation as demonstrated in the drawing, and in the same drawing the figure of a cesspit, or Royal Tube to be used for the waters running down the mountains and the cleaning of conduits and to be sent to houses, [8]. Knowing that the drawings/plans for the new city of Lisbon were the responsibility of Eugénio dos Santos [8] [9], it is important to know about his background and training. Olivera's contribution, [5].

For study of Eugénio dos Santos e Carvalho is quite valuable as it provides information on this 18th century architect, [10]. Oliveira analysed Eugénio dos Santos e Carvalho's personal collection of books and highlighted the existence of a body of architectural work based on French treatises or books [8].

Eugénio dos Santos e Carvalho would not have merely based himself on reference images but would have also absorbed the theory of the time: "(...) The affinities/relationship between the buildings in the city of Pierre Patte and Eugénio dos Santos e Carvalho are extraordinary because they cannot be reduced to mere graphic coincidences; both seem to share the same concept of roads as a regulating machine for various types of fluxes." [5]

Even Joaquim Machado de Castro, the sculptor of the equestrian statue of the king placed in the Praça do Comércio, in 1810 [11] states that French architecture served as an inspiration for Eugénio dos Santos e Carvalho's work. [10]

In relation to the typology of the Pombaline building, according to Duarte, [6] the engineers did not have enough time for speculation and would have relied on previous knowledge and experience. Accordingly, their great inspiration derived from the drawings of buildings that existed prior to the earthquake, some of which had been specifically designed for Lisbon. It is actually possible that the Pombaline building was a result of the typology created by the Italian architect Sebastiano Serlio (1475-1552). This author agrees with Oliveira [5] with respect to the main architects working on the Lisbon plan (Eugénio dos Santos e Carvalho and Carlos Mardel) being influenced by French lines/styles, [6].

In fact, if one were to examine books such as “L’art de bâtir des maisons de campagne” written by Charles-Étienne Briseux in 1743 [12] or “Cours d’architecture” by Jacques-François Blondel in 1777 [13] and then survey the Pombaline constructions, a certain resemblance would be noticeable. Thus, it is believed that there has always been an exchange or flow of cultural and urban planning ideas. One has but to think of the architects who worked in various cities. At the time of the 1755 earthquake various were the foreigners who worked on the drawings and plans for the reconstruction of Lisbon, among them: Carlos Mardel (Hungarian), João Carlos Bibbiena (Italian), João Frederico Ludovice (German) and Miguel Angelo de Blasco (Italian).

One of the oldest known maps relating to the reconstruction of Lisbon (following the appointment of Manuel da Maia) was drawn by Eugénio dos Santos e Carvalho and Carlos Mardel (c.1695-1763) [14]. Following the death of Eugénio dos Santos e Carvalho in 1760, Mardel continued to accompany the reconstruction sites in Lisbon as mentioned by Ratton [9]. If Mardel was in fact French, as suggested by Viterbo, [15] then one may hypothesise that he knew many French cities well and as such, his memories may have influenced his work as an architect and engineer at the service of king Joseph I.

Based on what was just mentioned, and the proven fact that Eugénio dos Santos e Carvalho had several reference books on French architecture in his personal collection, and considering that Eugénio dos Santos e Carvalho as well as Carlos Mardel drew the plans for the new eighteenth-century Lisbon, we are more alert to the discovery of similarities between the Lisbon project and certain French buildings.

2. Results and discussions: Praça do Comércio a royal square

Pursuant to the initially presented assumption, that the Praça do Comércio is based on a Royal French Square, it is important to characterise the French Royal Square and analyse Eugénio dos Santos e Carvalho’s private collection of books, as well as the iconography/cartography of these squares.

Grady [16] readdressed the issue of whether the French Royal Square were created by Louis XIV, by his minister Louvois, or by the historian Pierre Lavedan. Grady aims to question if, in fact, there is a royal square. Is it a continuation from the past or is it merely a creation of the time of Louis XIV? The singularity of the Royal Square is confirmed in his written work entitled “La place royale existe-t-elle? Réflexions sur les places royales en France sous Louis XIV” According to Grady [16], it was during Louis XIV reign (1643-1715) that the concept of a Royal Square emerged and was defined for the first time, particularly by Jean-François Lemée, a theorist for the monarchy, in his *Traité des Statues* (1688). According to Lemée, they should be even, ornamented in the centre with a bronze figure of the sovereign (king) and lined up on all sides with buildings with uniform façades. For Lemée, these squares should be placed in city centres.

The Royal Square evolved in its concept according to the times. It is even possible to distinguish two types of Royal Squares: the ones designed during the reign of Louis XIV and those pertaining to Louis XV. Royal squares built during the reign of Louis XIV consider the urban fabric and are geometrically very even. In these, the effect of a closed area is accentuated, controlled by the architectural configuration and enhanced by a central area linked to a central statue and access roads which are symmetrically arranged. It is possible to see these characteristics, with little variation, in Place Dauphine, Place des Vosges and Place Vendôme.

In Louis XV's 18th century, open spaces began to emerge in contrast to the previous period and their success was ensured by introducing an element of nature. The new squares could be open in three directions with open spaces [17]. In addition to the spatial concept, which established a relationship between the square and an open area (landscape), the urban road network was channelled towards the statue of the king, allowing the junction of various roads into different directions. Place Louis XV (currently known as Place de la Concorde) is an example of a square which displays these characteristics. These squares from the age of enlightenment, display an interrelationship between the square and the city, linking an urban open space to the landscape. They often justify the junction or union of roads in the outer limits of a city. This square was known for its "open" spaces and in its essence, characterised the artistic movement in styles from the 17th to the 18th century, becoming more involved and expressive with its surrounding environment. The Praça do Comércio depicts certain characteristics found in the Place Louis XIV, but also influences from the Place Louis XV, as an open space looking out into the landscape.

Lavedan links Praça do Comércio to other open squares built in the same period. He compares Praça do Comércio with Place of Bordeaux and states that Praça do Comércio in Lisbon is often seen as a replica of Place of Bordeaux. The author adds that the commercial ties between the two cities could perhaps explain this fact. Due to its location and the design of these two squares, he even compares these to Place Louis XV. Nonetheless, according to Lavedan, Piazzetta de Venise (St. Mark's Square) is actually the square which most resembles the Lisbon square, as both have steps leading into the water and columns. [19]

According to Zucker's [19] classification, Praça do Comércio is a "Dominated Square". Zucker proposes three different types of squares which have persisted throughout time, independent of the culture, typography or even climate. Paradoxically, the dominant element in a "Dominated Square" can be an empty space open to a view over a mountain or the bank of a river or sea.

Praça do Comércio features the defining characteristics of a Royal Square, in line with Lemée's definition, as it is a rectangular shape ornamented in the centre with a statue of the king, framed by buildings with uniform façades which form a balanced building curtain. Yet, it is not located in the city centre. Praça do Comércio and Place de Nos Conquêtes many features in common, namely their shape, dimensions and symbolic value. According to Oliveira, [5] Eugénio dos Santos e Carvalho based his project on the style prevailing in France; what had been built during the 17th and 18th centuries. Therefore, one may hypothesize that Eugénio dos Santos e Carvalho was aware of J. Hardouin-Mansart's works (architect of the Place de Nos Conquêtes at the service of Louis XIV). To a certain extent, the plans for Praça do Comércio may be compared to those for Place de Nos Conquêtes with a few exceptions. As Place de Nos Conquêtes (1685-99) was built before Place Vendôme (1699), it complies with the parameters set for Royal Squares, projected during the reign of King Louis XIV. These were located within the city limits, dotted in the urban fabric with no pre-established relationship between them. Despite being found on the outer limits of the city, Praça do Comércio was designed based on the urban morphology for the lower part (Baixa) of Lisbon. When analysed the cartography and iconography related to the rebuilding of Lisbon, more specifically the drawings for Praça do Comércio, as well as the existing iconography for Place de Nos Conquêtes. From this analysis, we highlight the following elements.

Upon analysing the cartography and iconography listed above, along with other documents, it may be confirmed that the first known technical drawings with a marking for the statue were made by Eugénio dos Santos e Carvalho, dating back to 1759, in principle. Most of the examined maps and drawings did not include the statue, only one from 1777.

Ochoa [20] holds the position that the inclusion of the statue is the result of urban planning for Praça do Comércio. This is one of the arguments presented by Lemée, who asserts that, in a Royal Squares, there is a need to harmonize the style of the architecture with the sculpted monument. This presumes that the architect designed the square taking the statue into consideration to balance the relationship between the two elements [21].

Table 1. Cartography and iconography from Praça do Comércio and *Place de Nos Conquêtes*

Type of documents	Source
1. Technical drawings with the distribution of architectural mass of the various volumes that make up Praça do Comércio.	Museu da Cidade – Pimenta Palace
2. Royal Square of Praça do Comércio displaying part of the Customs House (alfândega) and navy yard	Arquivo Histórico do Ministério das Obras Públicas, Transportes e Comunicações
3. Perspective view - reconstruction project for Terreiro do Paço (Praça do Comércio).	Museu da Cidade – Pimenta Palace
4. Drafts of perspectives for Praça do Comércio with turrets and cupolas, a project that was never used.	Museu da Cidade – Pimenta Palace
5. A perspective of La Grande Place de Lisbonne Nouvellement batie sur les Desseins de François Marca	Museu da Cidade – Pimenta Palace
6. Views and perspectives of Place de Louis le Grand	National Library of France
7. Place de Nos Conquêtes, inauguration of statue	National Library of France

The drawings that were found attributed to Eugénio dos Santos e Carvalho (2 in Table 1) presents the turrets, the arch and the statue as well as the arcade. At different information in relation to the iconography. One of the perspectives neither presents the turrets, nor the arch, not even the statue (5 in Table 1) while another does not display the turrets or the statue. The drawings which are most similar to what actually exists is the draft drawings “Draft of perspectives for Praça do Comércio with turrets and cupolas” which includes turrets with cupolas that were never built.

Both Praça do Comércio and Place de Nos Conquêtes have rectangular shapes (almost a square) with an opening on one of the sides and the centre is occupied by a statue of a sovereign on a horse, framed in the background by a triumphal arch. The arches are another common feature to the two squares. França (1987, p.158) described Place de Nos Conquêtes and Place de la Bourse and asserts that the latter resembles Praça do Comércio in the arches. What about Place de Nos Conquêtes? Here the arches seem to be hollow, a common characteristic to Praça do Comércio.

In terms of dimensions, Eugénio dos Santos e Carvalho and Carlos Mardel designed (1758) Praça do Comércio to measure 200 x 170m but when completed it occupied an area of 198 x 182m, while Place de Nos Conquêtes was designed to measure 168 x 152m [22] [23]. The dimensions of the Portuguese square are quite similar to the French square. This may be verified by multiplying the area of Place de Nos Conquêtes by 1.19, obtaining similar measurements to the Portuguese square. The drawing of the square, made in 1758, was slightly more rectangular in shape as the shorter side was 12 metres shorter than the actual built square and the longer side was 2 metres longer. As such, the actual built square is similar in shape to Place de Nos Conquêtes.

The final drafts for these two squares are very similar. Both present an arcade over which there are two storeys. The triumphal arch is found on one of the façades. The design of the French triumphal arch is simple as it merely includes a triangular pediment crowning an arch while the Portuguese is richly decorated in true baroque style. The main difference in the design of these two squares is in the open side of the square. The Place de Nos Conquêtes opens out into a street (Rue de Saint Honoré) represented by the symbols of coaches. Praça do Comércio opens out to the Tagus River and boats and thus the features of this square are also quite similar to the concept of King Louis XV’s Royal Square, which linked urban spaces to their surrounding landscape.

It is important to highlight one more common aspect to these two squares (Praça do Comércio and Place de Nos Conquêtes). The fact that they are a symbol of a Royal Entrance emphasized by the statue of the King and the triumphal arch. The triumphal arch, as a temporary arch, first appeared in the Royal Entry of Philip I in 1581. Following this event, entry type festivities or joyous entries were quite common in Terreiro do Paço. In the 18th century, the two main entrances were decorated for the entries of John V's consort in 1708 and Joseph's consort in 1729. The memory of these two events left their mark in the culture of the people and Eugénio dos Santos e Carvalho made use of these elements and included them in Praça do Comércio.

Praça do Comércio should not be regarded in an isolated manner but considered as belonging to a style and trend in Portuguese architecture that was common to this era and previous periods. Ludovice, the architect for Convento de Mafra (Palace of Mafra), also used his memory to design and draw the imposing building in Mafra, drawing two turrets identical to those built in Terreiro do Paço years before (designed by Terzi). When rebuilding Terreiro do Paço, Eugénio dos Santos e Carvalho also recreated two turrets which today flank the grand Lisbon square. One may thus assert that the Terzi turrets served as models, just as the main façade of the Monastery of S. Vicente Fora served as the model for the main body of the Mafra Convent.

Terreiro do Paço was not a square that was designed from scratch but a space which displayed various stages of history. As such, even though there might be some features reminiscent of the Terreiro in Praça do Comércio, such as the Terzi turrets, a clear theoretical foundation from the Age of Enlightenment is evident, where sobriety and practicality prevailed. The design for Praça do Comércio, with a rectangular shape (almost a square), was proposed for the first time in drawings dating back to 1756, sent in by Eugénio dos Santos e Carvalho and António Carlos Andreas. Later on, in the chosen proposal, a rectangular shape was chosen (almost a square) contrasting with the elongated shape of the previous space, the Terreiro do Paço, which demonstrates that not all was reminiscent of the past.

3. Conclusions

Is it thus possible to talk about a foreignized eighteenth-century Lisbon? Was Lisbon a source of inspiration to others? Based on the gathered information from different authors [2][3][6], today we may affirm that the designs and drawings from the second half of the 18th century for Lisbon were inspired on other foreign urban ensembles.

It is thus a known fact that Eugénio dos Santos e Carvalho was a well-informed man and that he may well have been influenced by engineers and architects from the time. Nonetheless, ironically it seems that his drawings and designs did not serve as inspiration to his 18th century colleagues: "(...) As his projects for the lower city (Baixa) were not published and remained in absolute anonymity on an international level, his work was not able to have any impact on the theory of architecture and urban planning for the second half of the 18th century" [5].

Lisbon thus had little influence on other areas, firstly due to its distance from Europe, and secondly due to the fact that what was built was done in a "closed-circuit". Despite this, García y Bellido believes that the design of the new Lisbon influenced both Carolina, a city in Andalucia founded in 1755, as well as Edinburgh [24]. Even though we may assert that Eugénio dos Santos e Carvalho was in part influenced by the architectural works of contemporary French architects, it is also true that his work is distinguished by his own specific characteristics. It is evident that there are several divergent views on the origins of the design and planning for Praça do Comércio. Given the information provided by certain researchers, we have opposing opinions which need further clarification. Our hypothesis is that Praça do Comércio is effectively a reflection of French influences from the age of enlightenment, namely from Place de Nos Conquêtes. Portuguese urban planning and architectural projects from the 18th century are a result of prior learning, where practitioners were able to articulate academic learning with vernacular architecture and where diverse influences affected the culture of the time.

The project for the lower city (Baixa) is a mixture of influences which originated from the architectural and urban planning tradition of the Portuguese Military Engineering School and contemporary French architectural works.

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