

# City-making <sup>in</sup> <sup>the</sup> Enlightenment the Rebuilding of Lisbon <sup>after the</sup> Earthquake <sup>of</sup> 1755

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The eighteenth century theoretical approach to architecture and town planning benefited from a long creative period. Throughout the two previous centuries, capital cities, residential cities and the colonial world had served as a field of experiment. The fundamental town planning principles were the *embellishment* and the *convenience* of the city. These concepts were in development from, at the latest, the sixteenth century. However, the eighteenth century embraced them as the paradigm of the new town planning programme. The emerging idea of the city envisaged a coherent urban unit able to supply its citizens with a favourable environment. The city should serve commerce and stimulate art and culture. The relationship between architecture and urban space should be strengthened. The rebuilding of Lisbon after the earthquake of 1755 followed these premises. Lisbon's city centre was rebuilt according to a new and regular plan. Portuguese military engineers conceived a rational ordering of the city, which was put into practice by an autocratic political power. The Marquis of Pombal, the Portuguese Prime Minister who ruled the country as an enlightened despot, was able to give structure to a city which was used as a means to promote his programme of reforms for Portuguese society.

### THE ENLIGHTENED IDEA OF THE CITY

Eighteenth century town planning projects used concepts which can be traced in city councils' documents as early as the sixteenth century. These concepts referred to the embellishment and the public convenience of the city. They were appropriations of the concepts of *venustas* and *commoditas* expressed by Vitruvius in his works. From the sixteenth century, these concepts were redefined as part of the new urban planning tendencies of architectural magnificence, regularity and symmetry. Thus, it can be considered that the concept of *embellishment* was linked to a sense of urban architectural dignity which was being defined from the late fifteenth century. This concept developed throughout this period and gained in the eighteenth century a dual meaning of formal prestige and civic awareness. Ultimately, it expressed the idea of the city as the most perfect representation of the excellence of Europe's enlightened civilisation.

The Enlightenment aimed to use the conceptual projects which it had established according to pragmatic interventions. The need for global urban planning was seen as a means of assisting the well-being of the citizen. In fact, there was a conviction that the city needed to be addressed as a living place. Already, some of these concerns revealed a hygienist approach to urban issues. The concept of the city thus became the result of a variety of elements, which having as their basis economic and social changes also incorporated philosophical and scientific principles.

Emulation and competition between the different countries were fundamental elements of the development process in all areas of European society. The Marquis of Pombal, the Portuguese Prime Minister between 1756 and 1777, wrote the following statement when staying in London as an envoy extraordinary; "All the European nations grew, and are still growing today, through reciprocal imitation. Each one watches carefully the actions of the others. In this manner, following the information of their ministers, all of them make their own use of foreign inventions".<sup>1</sup> In fact, no European country disregarded what was being created and implemented elsewhere in Europe. Throughout this period, the most revealing documentation about urban issues is often structured by an attitude of emulation: town councils' documents, general texts concerning architectural precepts or town planning principles in general claim successful foreign examples in order to stress the adequacy or urgency of their proposals. Despite regional and national characteristics and needs, it seems obvious that there was a general awareness of the availability of a homogenous theoretical and technical framework to town planning in seventeenth and eighteenth century Europe. The implementation of architecture as a defined profession with an inherent system of instruction and education (particularly in military architecture and later military engineering), and the invention of printing all concurred to that end.

### THE REBUILDING OF LISBON: THE POMBALINE PROGRAMME

A major earthquake shook Lisbon in the bright and warm morning of the 1<sup>st</sup> of November 1755. Two shocks were felt which, accompanied by two tidal waves, reduced the city centre to ruins. A fire which burned in Lisbon for a whole week completed the destruction. Approximately ten thousand people died, 10% of the buildings were ruined and two thirds suffered such destruction that they were not safe to be lived in.

Soon after the earthquake struck, the Portuguese Prime Minister, Sebastião José de Carvalho e Melo, future Marquis of Pombal, appointed the elderly military engineer Manuel da Maia to formulate a project for the reconstruction of Lisbon.

Pombal's ideas with regard to the new city had been maturing for a long time. The experience gathered through his diplomatic appointments in London and Vienna between 1738 and 1749 had considerably opened his views on the subject. Of particular interest are the letters that his friend, Manuel Telles da Silva, Earl of Tarouca, wrote from Vienna with regard to the rebuilding of the city. In these letters, Telles da Silva refers to some conversations he had had with Pombal in Vienna, just a few years before the earthquake:

"I remember that in those serene family discussions, in which we indulged, to me with great utility, some nights, we talked about the city of Lisbon and the development and extension of the city which had occurred before my time and was not of my knowledge; and with the few ideas that Your Excellency had given to me, thinking materially two months ago with the Marquis my brother, through a family letter, I told him, that it seemed according to the

royal providence, kindness and equity, preferring always the public convenience, and favouring, when possible, each individual, to order in such manner the forthcoming rebuilding of Lisbon, amending many of the old deformities and inconveniences, mainly in the old neighbourhoods, where the very narrow and winding streets are equally ugly and health damaging".<sup>2</sup>

If Baroque Vienna with its circle of enlightened individuals was likely to have been a suitable place for the maturing of Pombal's ideas with regard to the urban and architectural reform of Lisbon, London was certainly an inspiring model. In fact, we can sense Pombal's admiration for the English pragmatic approach to town planning and architecture in his letters from London:

"When I left Portugal I recall that a factory that made all sorts of silk upholstery was starting to prosper in Lisbon, whose building, from what I have seen, I can guarantee to Your Excellency is worth a lot more today than all those that exist in London and in its environs. In this country as soon as any artisan has enough capital to buy a weaver's loom with all the engines that go with it and the necessary security to find through credit all the raw materials which he intends to transform by his craft, he has found everything he wants to establish a good manufacture and to get wealthy. None of these men throw away their capital on the purchase of a noble building".<sup>3</sup>

In this letter Pombal expresses his views on the use of architecture and town planning as a means to develop his economic project for Portugal.

Pombal set up the enormous task of rendering Portugal a credible competitor in the European economic arena. To this end, he used enlightened despotism in a radical manner, establishing a very repressive political environment. To some extent, he was the true enlightened despot using a very autocratic political system to impose a project which he believed to be extremely beneficial for Portuguese society. Town planning played an important role in his programme of reforms.

Pombal's relationship with military engineering in Portugal was a crucial element in conceiving his urban strategy. The military engineers' vast experience in the kingdom and, most of all, in the empire, made them Pombal's favourite protagonists with regard to town planning issues. Also, Pombal cherished their pragmatic solutions because they corresponded to his own views on the subject.

The wide-ranging attributions and skills of the military engineers gave a definitive status to Portuguese military engineering and also equipped the country with a large and reliable group of versatile technicians. The close link between nautical and military matters and the political need of measuring, limiting and ordering the territory structured a well-defined approach to town planning. This approach is clearly illustrated in the spatial layout of the numerous colonial towns founded throughout the Portuguese empire, particularly in the urbanisation of Brazil from the seventeenth century. Rather than a rigid town planning scheme, Portuguese military engineers developed a number of chequered designs developing from a central square where the main public buildings were located. A combination of traditional methods and the Renaissance theoretical contribution was the basis for the Portuguese town planning strategy. The aim was to build cities which could better serve the political and economic programme of the Portuguese Crown. The result was the implementation of a pragmatic and rationalist approach, which could adapt itself to various circumstances as the site and the specific role of the city in the urban network demanded.

The military engineers' planning schemes conformed very well with the enlightened ideas with regard to an urban environment able to interact as a whole. As such, they also conformed with Pombal's understanding of the city, namely with the town planning projects he, apparently, had been nurturing for some time for Lisbon. The specific development of Portuguese military engineering and the maturation of its town planning solutions provided Pombal with not only a consistent body of experts but also a view on subject which he saw as the most compatible with the Portuguese urban reality and, most of all, with his own plans for urban reform. Pombal used all of this potential, giving to it, nonetheless, a very clear ideological and operational programme. Not only in Lisbon but also in Porto (1757), Vila Real de Santo António in the Algarve (1775) and extensively in Brazil, Pombal put into practice his ideas with regard to the city.

At the request of Pombal, Manuel da Maia wrote between December 1755 and April 1756 a document considering in detail a strategy for the rebuilding of the ruined part of the city. This work, *Dissertação*, comprises three distinct parts. In the first part, Manuel da Maia considers five options for the rebuilding of the city. In the second part, he examines each option carefully

before reaching a solution. Manuel da Maia indicates with precision all of the technical and legal procedures to be carried out: the buildings' structure and materials, the width of the streets, the urban sewerage and cleaning system, the method of dealing with the property rights, the correct and precise drawing of the new plan and the selection of the architects. The third text is attached to six plans of Lisbon's city centre; a plan of a street divided according to the London example (with side passages for the pedestrians) and three different façade designs to be used according to the importance of the street location.

Manuel da Maia starts by considering a number of choices with regard not only to the manner but also to the location of the rebuilding. In the first part of his *Dissertação* he presents to King D. José I the following five options:

- To rebuild the old city as it was before the earthquake;
- To rebuild according to the previous sequence of buildings whilst enlarging the old streets;
- To carry out the second option, reducing, however, the height of the buildings to two storeys;
- To rebuild on the old site, using an entirely new plan;
- To build a new city to the west.

The idea of developing a new city at the west end of Lisbon had been present since the sixteenth century. From this period, undoubtedly the west begins to be the main location of Lisbon's urban development (see .1). This area did not contain most of the inconveniences of the old medieval centre. The possibility of creating a new urban environment outside the confines of the old site was an exciting prospect: in *Belém* (Lisbon's western district) Manuel da Maia envisaged the building of a wider city, developing horizontally. When considering this solution, Manuel da Maia also contemplated some practical aspects deriving from the gruesome reality caused by the earthquake and the negative effect of the victims' remains on the stability of the building ground.

However, ultimately Manuel da Maia considered the rebuilding of the city on the old site as the best option. This decision seems to have resulted from the assumption that the rebuilding of the old city should be done according to a regular plan. This possibility is not contemplated in the fifth option for financial and legal reasons. Manuel da Maia was aware of the fact that the old city would have to be rebuilt: "It seems to me indisputable that there is the want to renew the downtown".<sup>4</sup> In fact, the downtown had been the city centre for more than three hundred years. Its favourable relationship with the rest of the city and the river strengthened its urban function. Apart from being the location of the old Royal Palace, it was also the site of the main public buildings, such as the Custom House and the Stock Market, and therefore its properties were valuable. Therefore, the proprietors would surely want to rebuild it. The project of a new city to the west would leave the rebuilding of the old city without any type of control. Thus, in the second part of his *Dissertação*, Manuel da Maia ingeniously tries to recommend to the King the fourth option. Gradually, by listing and pondering the main steps to be taken in order to secure a swift and safe rebuilding, the military engineer finally presents the solution: "As for the three methods of renewing the downtown, I consider the best and most appropriate, the first, demolishing it all and renewing it all".<sup>5</sup>

Throughout his text, Manuel da Maia refers several times to London and Turin as the most recent and noteworthy European examples of town planning. However, he complains about the difficulty he had in obtaining some reliable material on these two cities: Manuel da Maia blames the earthquake and the lack of a much-needed Portuguese Library for these circumstances. It is evident that the old military engineer was aware of the major responsibility lying in his hands and he wanted to use other European examples in order to obtain the most suitable and practicable solution. London was important for its utilitarian approach to town planning and urban issues: the division of the streets in three parts, the sewerage system and the efficiency of the Customs' procedures are the aspects referred to by Manuel da Maia. Turin does not seem to be a very useful example for the military engineer as:

"The renovation of the Court of Turin, it was not as some say the demolishing of the old Turin to build the new Turin, since it was simply the linking of the new Turin to the old Turin, making an addition to Turin on a flat adjacent area which was not a difficult task to accomplish; therefore I conclude that the renewing of the destroyed Lisbon needs a lot more of deliberation than the extension of the added Turin [sic]".<sup>6</sup>

The recognition of the major task ahead of him led the military engineer to select the team of experts to work on the formal layout of his project cautiously.



Fig. 1: Plan of Lisbon in 1650. João Nunes Tinoco.

Therefore, Manuel da Maia directed his choice to Eugénio dos Santos, the city council architect and an experienced military engineer, together with Carlos Mardel, a military engineer who had also been engaged in major city works.

Manuel da Maia's considerations and proposals were coincident with Pombal's projects for Lisbon. There was, in fact, a remarkable consonance of ideas between the engineer and the politician. Pombal not only supported this project but also contributed to the fundamental concept of the city expressed in it: a regular urban structure designed for the convenience of its citizens and the expediency of trade.

A team of military engineers, directed by Manuel da Maia, presented six different plans on 19th April 1756. Plan six, by Eugénio dos Santos, was chosen by Pombal to give shape to his idea of the city (see fig. 2).

Eugénio dos Santos's plan is a chequered design taking advantage of the topography of the site. It rearranges the area between the two main squares free from previous defining elements, for example the location and alignment of the main streets and the inclusion of all of the churches. Nevertheless, this town planning redefinition reinforces the function of the old downtown. The commercial heart of the city is reordered to better represent and serve its main purpose. The plan develops from the river to the north, presenting the old *Terreiro do Paço* (Palace Courtyard), now named *Praça do Comércio* (Commerce Square), as the ordering element. The new square is planned as the site of the main public buildings, particularly the state headquarters and the stock market. The Royal Palace is displaced to the west end of the city. The sober yet monumental character of the *Praça do Comércio* expresses the main concept of the rebuilt city. It is:

"simultaneously and paradoxically, its luxury and its symbol: it represents, in an abstract mental context, the material power and the spirit of economy of the new city" (see fig.3). To the north, the *Rossio* closes the urban maze by its symmetrical western alignment with the main square. Between these two open spaces, five main roads develop vertically, being flanked by three secondary streets, and eight roads run perpendicular to the main roads.

Pombaline Lisbon was mainly a town planning venture and its architecture was submitted to the demands of its spatial concept. Following Eugénio dos Santos's proposals, a series of façade designs were created in the *Casa do Risco* (the institution created by Pombal to assist the rebuilding) to be applied in different areas of the city centre (see fig.4). Not only did the façades conform to a pre-defined architectural solution, but also the building projects were conceived as whole structures. The whole building process was standardized in order to respond to financial constraints and the demands of efficiency.

Private landowners built the bulk of the new city. However, they followed a precise spatial and architectural programme projected and directed by the State. It was a model made feasible by a coercive and well-structured global plan of action. Without the combination of technical expertise and political structure, Pombaline Lisbon would have never been accomplished.

#### NOTES

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Fig. 2: Eugénio dos Santos's plan for the rebuilding of Lisbon.



Fig. 3: The *Praça do Comércio* (Commerce Square).



Fig. 4: Design of a façade to be used in Lisbon's main streets.