

# TRADITION AND INNOVATION IN THE SCENERY CITY'S ARCHITECTURES: THE IMPACT OF FILIPPO JUVARRA IN CARLOS MARDEL'S 1733 PLAN FOR LISBON'S RIVERFRONT – A WATER-CITY PROPOSED DESIGN FOR THE ENVISIONED “ROME OF THE OCCIDENT”

ARMÉNIO DA CONCEIÇÃO LOPES & CARLOS JORGE HENRIQUES FERREIRA  
CIAUD, Lisbon School of Architecture, Universidade de Lisboa, Portugal

## ABSTRACT

The territory, as it was understood in the medieval period, undergoes a shift of paradigm in the early stages of the modern age. The growing importance of European capitals and city-states, as an expression of the court life of absolutist monarchies, and the advent of the Counter-Reform movement provide urban spaces with diverse moments and events, where architecture plays a decisive role in the assertion of different powers – notably within royal and religious elites. In the early 18th century, the highest power belonged to King João V, who wanted to transform Lisbon into the new “Rome of the Occident” in an effort to seek validation from the religious establishment of Rome. For that purpose, Filippo Juvarra was one of the talented architects brought to Portugal to apply the monarch's ideas. One of the least studied projects is the one signed by Carlos Mardel, which intended to significantly change the image of the city throughout several miles of its riverfront. By employing scenographic strategies from the Baroque period, the proposed plan reveals a very smart hydraulic technique which allows for the blending of the water and the “new city,” forming a harmonious combination. The Portuguese model shows that the need to assert Lisbon as the capital of an overseas empire triggers changes in the architecture and the urban scenography, in order to feed new desires and ambitions. Taking into account that the most widespread images of Lisbon are its views from the river, the proposals for the regularization of the riverfront are now seen as an innovative and strategic motivation to recreate the city's image. As heirs of a strong tradition, based on a constructive praxis, engineers, architects, and construction masters develop innovative projects in response to new challenges, which will have considerable relevance in the international context.

*Keywords:* Baroque scenography, Carlos Mardel, Filippo Juvarra, Lisbon's riverfront theater curtain, Rome of the Occident, urbemism, water-city.

## 1 INTRODUCTION

Time, shapes and places have very particular contexts, sometimes difficult to unravel, especially from a distant research perspective. Between the mid-17th century and throughout the 18th century, we identify a period of unique architectural production, when its relationship with the landscape reveals new developments with repercussions on project theory and practice.

The conflicts generated by the reformist ideas and the counter-reform response – primarily from Rome – the absolutism of the French monarchy centered on Louis XIV and the growing influence of the enlightenment thought, define the complexity of this period, which, in turn, underlines the need to search for alternatives to recover the idea of a unified society that supported the ancient world.

The mentality and innovations that emerge from this period – although pluralistic in nature, paradoxically long for the idea of unity. Amid religious convictions, political arrogance, and a growing awareness of free will (due to the enlightenment thought), compromises are established between faith, art, technique and economics that feed the



creative spirit of the Baroque style, justifying the controversy and ambiguity that its expression originated.

A new trend, partly inherited and inspired by the rediscovery of classical architecture, is characterized by greater formal and conceptual complexity, in which several artists stand out, with emphasis on two major European locations, namely in the Italian atmosphere of papal influence and in the French monarchy.

In this context, a deeper commitment between architecture and other arts is considered, focusing on the design of gardens and the relationship between architecture and the landscape, within a new sense of place, with emphasis on its importance in urban development. The plans for Rome, guided by strategic axes that favor perspective effects referenced in notable buildings or sculptures and symbolic elements, accentuate a specific idea of monumentality, where architecture and place gain new meanings and new purposes within a certain scenography and theatrical exploration.

On the one hand, the Renaissance flourished linked to the interpretations of the classic works of imperial Rome, where Vitruvius' legacy remained a unique reference to the thinking and projecting process. On the other hand, the mannerist interpretations and innovations of its heritage contributed to new, bolder expressions, through Michelangelo or Serlio. These trends that marked architectural production throughout the 17th century – such as the Vitruvian and Serlian orientations, and the affirmation of a particular architecture designated as *Chã* (Plain Style) [1] – changed in the 18th century, due to a new dynamism associated with the Baroque spirit. In a new artistic and conceptual exploration, several authors stand out as main influencers in this period, such as Gian Lorenzo Bernini, Francesco Borromini, Guarino Guarini and Pietro da Cortona, to which we can add François Mansart, Christopher Wren, Andre Le Notre, among others.

Along these lines, architecture emerges within a singular synthesis between dynamism and systematization, in search for a significant completeness [2]. This synthesis of centralization and linear direction, reflected in the French royal squares or the axes suggested in the Rome of Sisto V, will find means of project exploration and unique achievements in several European cities.

Among the innovations of the Baroque period, specifically in the relationship between architecture, landscape and place, it should be highlighted the idea that space does not surround architecture but permeates its forms, it is imbedded in the design. Space is not an external element, that merely outlines architectural pieces. Space is a meaningful, inclusive aspect, generator of the spectacular perspective seen in the overall city and in the objects within (such as buildings, statues, staircases, streets, and so on). It is a glorious symbiosis of space and matter. This idea strengthens the interpretation of a continuum fueled by perspective simulation and formal dynamism [3].

To these ideas, referenced by several authors who studied this period, it is important to add contributions that reveal the originality of this thought, free from the total control of papal Rome or French absolutism. In this regard, it is imperative to discuss the Iberian endeavors, distinguished by an overseas commercial and cultural context, and an unparallel relationship between architecture and waterfront landscapes. By this time it emerges a new data: the development of a city's project process has a great significance in the history of the city, as an object of architectural and urban reflection of the Baroque period.

## 2 A NEW IMAGE FOR LISBON IN THE REIGN OF KING JOÃO V

The decision to establish the view from the river – the *Ribeira* – as the physical support for a new image of the city, was based on the strong and ancestral relationship of the capital with a vast overseas empire. The main entrance to Lisbon, the waterfront, was the main attraction,



the calling card of the city. Thus, those who arrived from the river needed to be amazed with the splendid, glamorous view, in aesthetic terms, of the capital of the empire.

The Class of the Sphere – in the College of *Santo Antônio* – lectured by the Jesuits (1590–1759), contributed to the transmission of scientific and mathematical knowledge. The development of navigation in the age of exploration and discovery of new territories, added practical and theoretical knowledge to the traditional teachings of mathematics, geometry, cartography, algebra, and cosmography, as shown by Pedro Nunes (1502–1577), the high-cosmographer of the reign [4] (Araujo). This new knowledge advanced the materialization of a solid relationship between theory and constructive practice, particularly on the defense requirements of ancient and new overseas possessions.

The whole commercial, political and administrative dynamic surrounding the maritime Empire, was centralized in Lisbon – particularly, in the new downtown: the *Ribeira*. To support this new centralized dynamic, private palaces are built positioned along the riverfront, starting from *Terreiro do Paço* and *Ribeira das Naus*, to the west and east [5]. The gradual occupation of the land outside the walled system revealed a high sense of security in the defense. The sense of security and the new buildings outside the high walls, fostered even more the development of the riverfront.

The subject of security is relevant. Aside from people already living outside the walled system, there was a great development in pyro ballistics. Additionally, since Lisbon had an exceptional strategic position, the new palatine riverfront suppressed defense features. This was a major shift of paradigm regarding the capital's defense needs.

The idea of a “Rome of the Occident” filled the imagination of many influential people for many decades. For instance, Father Antônio Vieira (1608–1697) encouraged the myth of a Fifth Empire [6]. The writings of Father Antônio Vieira had a religious and mystical dimension surrounded by a holistic view of the capital of an overseas Empire: this was viewed as a way of spreading the Christian message to the world. King João V (1689–1750), a devout man with various cultural interests, probably knew his sermons as he was born during the life of the Jesuit priest. Most religious sermons in that era were written with such assumptions: it had become usual to compare Lisbon to Rome. Thus, it is not surprising that the monarch took a messianic strategy. The goal was to turn Lisbon into the successor of Rome, and the Portuguese Empire would be the replacement of the Roman Empire.

King João V's desire to elevate Lisbon as a new Rome was established at the beginning of his reign [7]. And it lasted until his death, to the extent that the eulogy in memory of King João V references the New Rome of the West, Lisbon, in comparison with the New Rome of the East, Byzantium [8]. King João V had an enormous need for approval by the European nations; he wanted to be seen as a powerful sovereign of an overseas empire. In order to achieve that, he decided to undertake a grandiose endeavor. The best place to show it, to provoke the most significant impact, is the riverfront, since the main images of Lisbon are views from the river. Thus, to create a new image for the city, it would be crucial the regularization of the riverside by conquering some land over the river. The sovereign had the intention to assert Lisbon as the capital of the Empire, with a new image as viewed from the river. Aided by religious devotion and, above all, by Brazil's recent gold and diamond discoveries, the absolute monarch stimulated the construction of an impressive riverfront. The king himself acquired six farms in the *Belém* area [9], in order to contribute to an increase in demand for this location by members of the royal court and other members of nobility. The option to expand the city to the west was an old desire that peaked in the period of João V. Rome and Italy were the great cultural and artistic references of the time: they were the major influential hubs for knowledge, culture, art and artists. Many artists and knowledge seekers from all over Europe were sent to study in Italy; and many established artists and



experts in different fields left Italy to develop various parts of Europe. Since Sixtus V's plan for Rome (with the new requisites that emerged from the counter-reform), the principles applied to the embellishment of buildings and the city as a whole required an architectural component. The strong Baroque influence of the spectacle-city populated the imaginary of European courts.

In the 18th century, Portugal had great experience in waterfront urban settlements, in the many maritime cities of its vast overseas empire. In those places, in the middle of the Baroque period, autonomous models were developed in the occupation of waterfront territories. In the vast territory of the Portuguese empire, there was a need to consolidate squares, places, and cities – the technical drawing component, transmitted by treaties and writings, had become a critical tool, as seen in the developed projects. As a result of this systematic action, until the end of the 18th century, Portugal kept military architects and engineers developing public projects. Some of these experts, with military training, mutually shared their knowledge with architects, master builders, masons, and other craftsmen. Like in other European cities, Lisbon's riverfront established itself, starting to take shape with a renewed land project. The spectacle character of the Baroque established the physical reality of the riverside as a new way of creating waterfront architecture. The city sought to create moments for visual pleasure. It became a scenographic support, as a means to see the city beyond its scale (from within) and, simultaneously, to see it as an object of contemplation (from the outside).

During a Royal embassy, sent to Rome by King João V, an invitation was made to one of the most recognized Italian architects of that time – Filippo Juvarra (1678–1736) – to work in Lisbon. Juvarra's professional training as a goldsmith made him craft beautiful pieces of jewelry; these skills expanded into the design of creative pieces of architecture. Juvarra was born in Messina, which had been an important port for centuries and had a physiographic position akin to Lisbon, in terms of the dimension of the riverside. Both cities had similar characteristics, especially when viewed from the water (the ships arrived from the sea in analogous circumstances). Those assumptions are very clear in Juvarra's drawings, for Messina such as for Lisbon, with a real similarity in the approach to the territory [10]. At the Portuguese court, Juvarra developed designs for Lisbon's embellishment projects, such as a Royal Palace, a Patriarchal church and a lighthouse. All of the draws establishing a scenic view to Lisbon, from the Tagus river. Maybe this was the main reason for Juvarra's criticism to Mafra complex (*Convent of Mafra*), from the architectural planes to the place – saying that it was an arid and desert land, with no water [11]. By using sketches and drawings to a great extent, the works of the Italian architect conveyed idyllic scenes. Juvarra was familiar with the *Teatro Marittimo di Messina* (also known as *Palazzata*), the magnificent water front where he also develops the project of restructuration and enlargement of the Royal Palace in 1714 [12]. Messina was known by its natural and architectural beauty, mainly due to the vast urban front of sumptuous palaces that faced the sea. Juvarra's personal view for Lisbon mirrored the spectacle-city where he was born, Messina (Fig. 1).

Furthermore, Juvarra designed a lighthouse for Lisbon (Fig. 2) extremely similar in structure and image to the one he also designed for Messina five years earlier (Fig. 3). He proposed the same elevation of the lighting point, through a circular tower, that simulates a pedestal in the form of a commemorative column (triumphal column), which resembles the Doric column ornamented with a human figure at the top [13]. Both proposals convey a strong relationship with the Trajan's column: the proposal for the Tagus lighthouse tower is the one that most resembles it, topped by a pedestal, with a human figure at the top – which is almost identical to the Roman column, surmounted by a pedestal with a statue of St. Peter, placed there in 1588 by order of Pope Sixtus V (Fig. 4).

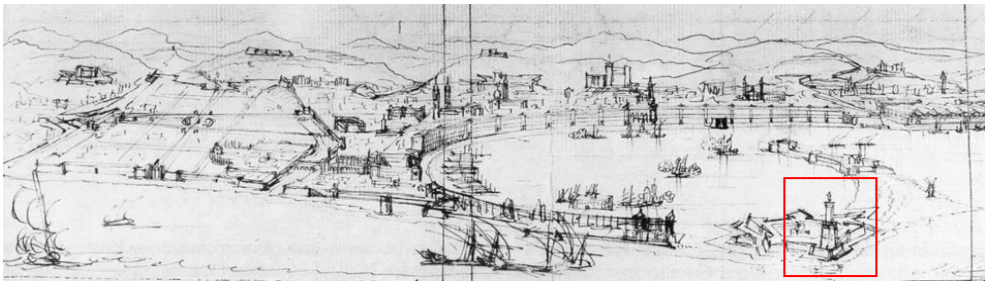


Figure 1: Juvarra's drawing – view of Messina and the plan for the new Royal Palace, 1714. (Source: Turin National Library.)



Figure 2: Juvarra's lighthouse design for Lisbon – 1719.



Figure 3: Juvarra's lighthouse at Messina (excerpt from Fig. 1).



Figure 4: Trajan's column in Rome – illustration by Piranesi.

According to illustrations of that time, Messina already had a lighthouse. However, the Italian architect, certainly inspired by the emblematic columns topped by statues, redesigns the lighthouse, proposing to place at the top of Messina's lighthouse an identical image, in representative terms, to the one used in the proposal of the lighthouse for Lisbon's waterfront. The lighthouse would not only function as a warning for navigation, but also as an ornamental column – a scenographic image to embellish the riverfront. Thus, the grandeur aspect of the Baroque character that defines the thinking behind a whole proposal of city scenery is expressed in this new idea to beautify Lisbon's riverfront: the spectacle, the elegance, the exaltation of certain public figures, the grandiose style of territorial landmarks, along with other characteristics of similar nature.

After the departure of Juvarra from Portugal, no plans were developed to change the image of the city. After about a decade, the Hungarian architect Carlos Mardel (1695–1763) arrived in Lisbon from England. Between the departure of Juvarra and the arrival of Mardel in Portugal, no significant changes happened to the riverfront. During this interval, the king ordered a survey to get information in terms of geography, physiography and cartography, with the goal of providing groundwork for future developments. Even after Juvarra left Lisbon, the monarch's intentions remained unalterable: a letter from King João V to the Chief-Engineer of the kingdom, Manuel de Azevedo Fortes, references the geographical locations of *Pedrouços* and *Corte Real* (Palace) providing an indication for the size of the territory to be mapped, intended to be modified [14]. However, as mentioned, nothing relevant was done to the riverfront until Mardel's arrival.

Mardel arrived at Lisbon in 1733, roughly three years after the consecration of the Convent – Royal Palace of Mafra (October 22nd, 1730), whose works would continue until 1744. In all likelihood, Mardel visited Mafra's work, where he witnessed the royal aspirations at the time, in aesthetic terms. The building and its entire factory were established as champions of the national Baroque.

The military engineer and architect was valued in terms of regularizing waterfronts. Coincidentally, in the year of his arrival, a plan to regularize the riverfront appears with his signature. As for the contacts that take him to Lisbon and that make him develop a plan for the city, the context is not entirely clear. The records indicate that he immediately takes part in the building of the *Águas Livres* aqueduct and develops the project that ends the influx of water to the capital: the water reservoir of *Mãe de Água*, at *Amoreiras*. The professional connection to the waterfront is maintained, as he develops projects (examples: stone pier, *Lázaro Leitão* house, palace of the Eagles) located between *Belém* and *Alcântara* – along

*Rua da Junqueira*, which were on the riverside at the time. Moreover, Mardel develops several projects, in which the “water architecture” plays an important role, such as the urban embellishment through several fountains – among many other projects and plans, from his arrival in Portugal until his death, where he shows his skills as an architect and engineer [15].

### 3 A PLAN FOR A CITY: A SCENOGRAPHY BASED UPON WATER

Juvarra and Mardel may have never crossed paths, but the ideas of the former likely influenced the work of the latter. The king himself had, probably, some weight on this influence, since he had the opportunity to discuss ideas and drawings by Juvarra with Mardel, including the coastal image of the city of Messina and the *Palazzata* – named after the row of palaces placed on a continuous urban front, facing the sea (Fig. 5). The image of Messina was well known in Spain (Fig. 6) [16], even during the Iberian Union, when Spain’s empire had also the domain of Portugal and Sardegn Kingdom.



Figure 5: Painting depicting the city of Messina (18th century).



Figure 6: Gabriele Merelli, *Messina*, 1677 (24.6 × 37.5 cm), Madrid (Spain), Library Francisco de Zabálburu, Ms. 73-511, fol. 24r.

A similar idea was attempted for Lisbon: an idea for the entire city was based on a plan for Lisbon’s riverfront, which would have a land extension bigger than ever before (Fig. 7). It establishes a whole new design for the western riverside front. It is through this riverfront scenography that a new image for the capital is sought.



Figure 7: Carlos Mardel's 1733 plan for Lisbon's riverfront (black rectangle is analyzed on Fig. 8). (Source: Library and Historic Archive – Ministry of Public Works, Transportation and Communications. Carlos Mardel, *Explicação do Caes Novo de Belém ao Caes de Santarém*. Cota D 27C.)

The proposal is loaded with a strong Baroque character, with an extreme appetite for the spectacular. There was a mixture of spectacle, fantasy and the sublime, in order to generate an innovative design. New ranges of Baroque urbanism are established, by defining a new scale and a new design, empowering the creation of a new city architecture. The end goal is to develop an "ideal city," a "scenic city."

Mardel showed that his combined capabilities as a military engineer and an architect, enabled him to excel as an expert, providing evidences of his boldness and of a grand vision for the capital of the kingdom, which was aligned with the King's expectations. Mardel reveals a great capacity for understanding and expressing the Baroque principles in his projects. As Helder Carita defends, Carlos Mardel reveals another way of thinking about the city and its potential urbanism, opposed to the plain Cartesian rationalism and militaristic uniformity promoted by Portuguese engineers. Mardel's works displayed a scenic and festive sense of Baroque philosophy, and a wise and pragmatic adaptation to the realities of the natural landscape of a city cut between valleys and hills overlooking the Tagus river [17]. Later on, in the course of his work, the Hungarian architect would manifest talent and technical capabilities beyond the layout of the "new Lisbon," developing professional activity in various fields of architecture.

The plan was developed in the early 1930s of the 18th century (1733). It may have acted as a professional test to assert himself as an architect on his arrival at the kingdom. By combining aspects of constructive techniques by the water, Mardel gave evidences, as a military engineer, of a skill established by Vitruvius for the profession of architect, in the VIII book: to master the subject of hydraulics. This is, for G. Guarini, the 5th Factory: the Aquatic [18]. Analyzing the architectural project, we can see the intention of having water running through the city adapted to a new design. The area between tidal lines is intended for new buildings. A programmatic analysis concludes that, in fact, the improved city is drawn *in water*, advancing beyond the stream banks, onto the river (Fig. 7 and detail on Fig. 8).

One of the aims of the plan is to create a distinct urban moment, opening the city to the river: a "water square" is created, defined by two edified volumes, perpendicular to the river, without a building at the top [19]. It is called *Molho Grande*, located in the area called *Boa Vista*, between *Largo da Esperança* and *Casa da Moeda* (indicated by the white arrow in Fig. 8). Previously, in this area, facing the river, there was the intention of building a royal palace – this early idea probably justifies this exception in terms of river views. Delimiting the whole front, the continuous "river wall" serves as support for a wooded riverside promenade.



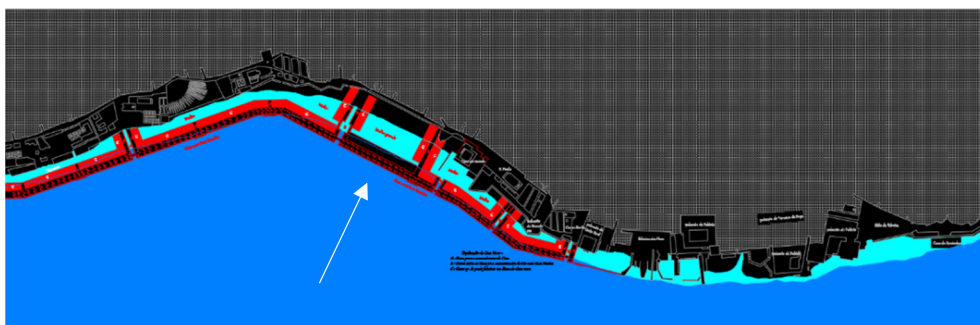


Figure 8: Excerpt from Fig. 7 (area of the black rectangle). Mardel's plan for the area between *Tercenas* and *Terreiro do Paço*. Red: the buildings and the wooded riverside promenade; public walk with trees over the water. Blue: water. Cyan: the water between the new and the old buildings; tidal water entering through the canals. White arrow: interior water square, scenographic area open to the river. (Source: Drawing made by the author of this article.)

Juvarra's proposals essentially consist of embellishing the hillside facing the river, as well as entering Lisbon by sea. Mardel's proposal, however, is bold and progressive. Mardel plans the "new riverside city," with a linear layout and geometry, integrated with the environment – land and water. It is an example of sustainable development that is very up to date for the present – as if the architect himself could foresee centuries of distance, the very problem of rising sea waters.

One of the evidences of the programmatic assumptions of Mardel's plan, is surprisingly expressed in a letter addressed to Marquês de Pombal, sent by Lázaro Leitão Aranha [20]. The author of the letter is the owner of the palace at *Rua da Junqueira*, named *Casa Nobre* – Lázaro Leitão, projected by Carlos Mardel. This mansion, located on the riverfront at the time, was the first materialized project by Mardel in Portugal. Besides being a relevant ecclesiastical figure, among other titles, its owner was a teacher at the University of Coimbra. He was a person close to King João V – their relationship began in the first decade of the reign. He was aware of the monarch's desires; as a result, he was included in the royal group – called *embassy*, a diplomatic mission sent by the king – that travelled to Rome in 1712. Lázaro Leitão Aranha – Deputy of the Holy Office – was then 34 years old.

Lázaro Leitão is one of the main agents of the monarch's intentions and magnanimous aspirations. Among other aspects, Leitão visited Rome with the mission of obtaining a "Bula Aurea" from the Pope: the aim was to divide the city of Lisbon in two halves (Eastern and Western). Leitão also requested an authorization to build a new Patriarchal (the city's second cathedral). These authorizations, including the "Bula Aurea," were obtained on November 7th, 1716. Consequently, the city turned into a new administrative, religious and legal center [21].

The Royal expedition returns to Lisbon in 1718. In the following year, Filipe Juvarra – who, at the time, was considered the most famous Italian architect – arrives in Portugal. While in Rome, Lázaro Leitão presumably met Juvarra and learned about his importance as an architect. They were both ecclesiastical men, with Juvarra belonging to the Order of the Theatines. This religious organization had a great influence on the development of the Italian Baroque – they were the heirs of Mannerist principles and were committed agents of the aesthetic languages of the Counter-Reform movement. The most popular member of the

order was Guarino Guarini, author of the project for the *Igreja da Divina Providência* (Church of Divine Providence) in Lisbon [22]. Guarini had developed projects in Messina, where he worked as a mathematics and philosophy teacher, from 1660 onwards. Juvarra was Guarini's disciple, although he became mainly known for working in Carlo Fontana's workshop and for the catafalque designed in memory of the Portuguese King Pedro II located at the Church of Santo António dos Portugueses, in Rome.

Lázaro Leitão remained loyal to his assignment in Rome, even after the king passed away. The evidence is in the efforts that Leitão made to convince the Marquês de Pombal of the advantages to redesign the Western side of the capital, after the earthquake. This purpose is strongly expressed in the letter addressed to Pombal after the catastrophe, which brought down, among other buildings, the Patriarchal for which Leitão had obtained the Pope's permission. The letter was written when the location for the reconstruction of the capital was being decided. According to Arthur Lamas, the text lists and corrects the main flaws of the old city. The message argued in favor of building to the West. The different reasons included beauty, functionality, security, commercial issues, good taste, and specifically, the view from the river: the image of Lisbon for those who enter or leave the capital by sea – by the main port of Lisbon. On those aspects he even appeals, as examples of beauty and public quality, to Italian cities like Naples and Messina. Leitão even referred the great characteristics of the beaches in the western region (their length and terrain), although the beaches had two private owners – this disadvantage would be easily overcome, according to the letter, with the declaration that the site was “convenient to the public”: thus, the individuals should give up the right to the land. The occidental area where the former King João V, had already acquired several parcels of land, previously to the earthquake.

The suggestion to redesign the Western zone was expected, since it was the most advocated hypothesis initially – right after the catastrophe, and fearing earthquake repetitions, the predominantly supported solution was the revamp of this area, since it was the section least affected by the disaster [23]. As França explained, in the first advanced document or “dissertation,” as to the principle that the reconstruction should obey – among the five hypotheses (...); the fifth hypothesis proposes to abandon the city in ruins leaving the owners to do whatever they wanted, and to build a new Lisbon on the west side of the old one, on the land close to the Tagus river that the earthquake has saved – this was the most discussed idea, to rid the capital of similar disasters (...). Manuel da Maia declared his preference for such an idea that would allow him, without hindrance, to create a more solid and more beautiful city, but the choice belonged to the king – in fact, to Pombal, according to José-Augusto França.

When comparing Leitão's letter to Pombal and Mardel's project to regularize the riverfront, it is obvious that all the aspects listed as flaws in Leitão's letter were fixed in Mardel's project, and the several features considered as advantages by Leitão were highlighted in the Hungarian architect's plan. In regard to the flaws, these were qualities that the city lacked in contrast with other great European cities: the city lacked a public walk for the public to enjoy the view of the sea and lacked a wide street over the sea; Lisbon's view from the sea, up close, included only bald precipices and cliffs (not beautiful tall buildings); the beaches of Lisbon served for contraband; the people who traded did not have safe warehouses to store their possessions; and so on, as A. Lamas mentioned.

As mentioned before, the goal was to create an “ideal city,” with Europeanized characteristics. The Baroque philosophy included components of exuberance and magnificence, that the capital of the empire lacked. The criticisms focused mainly on what was idealized, that did not exist in the city. Overall, the terrible earthquake was seen as an opportunity to provide dignity to the image of the capital.



Yet, some questions still remain: did Mardel share the ideas of the plan with his client Lázaro Leitão, who now sought to defend them by convincing Pombal? Or was King João V who introduced the ideas for Lisbon's great plan to the religious man, seeking to impress the Pope?

The design for the new urban front of Lisbon surpasses the vision of a basic façade. The Baroque tendency for the scenographic spectacle and opulence, pleased the magnanimous King. Due to the royal desire to turn the capital into a grandiose sight, the intended volume of construction was impressive – the image for the “new European capital” could not be limited to building a new patriarchal and a palace. The “new city,” expressed in Mardel's plan, defined the new architecture of the city and simultaneously its own scenario. The entire western riverfront, from *Terreiro do Paço* to *Belém*, would include a vast housing complex, in several blocks, along the shore. It is a simultaneously regular and organic layout, which metamorphoses between the old riverside fabric and the tidal line – defining a new cityscape which “hides” the ancestral urban “mess” by creating a highly scenic built curtain. That's an example of the layout as a contribution of homogeneity and regularity, for the architectural unity of the whole, as a strategy to preserve the Baroque waterfront urban scenery.

Between the period of Mardel's scenography for the riverside front and the post-earthquake recovery, another Italian architect arrived in Lisbon, in 1752. Giovanni Carlo Galli-Bibiena arrived in Portugal by request of the King José I, and developed works with a heavy scenographic French for the capital: from the Tagus Opera to short-lived architectural pieces [24]. However, the magnificent plan outlined by Mardel would only be matched, in terms of spectacularity of city design and urban scenery, by the *Plano da Baixa Pombalina* – the plan for the downtown area named after Marquês de Pombal.

#### 4 CONCLUSION

In the Baroque period, there isn't a specific established urbanism, but a set of Baroque principles applied in the cities. The design of the capital, by itself, would not turn Lisbon into a Baroque city. In other cities of the world, in the same period, there are some urban pieces, places, streets, squares, urban fronts, alignments, fountains, obelisks, and other elements with a great scenic effect, where there is an appeal to the spectacle and the view. The same would happen to Lisbon: the western section of the capital would be flooded with Baroque ingredients; however, we still could not call it a “Baroque city.”

Mardel's project for the capital is a bold proposal, with a strong structural character for the western side of Lisbon. In the portions of the city that benefit from the Baroque style, most design proposals take advantage of the void (space) to create the moment of spectacle of the square, from a perspective point of view. A piece of an urban design project that, due to the nature of its connection to water and the definition of its layout, is completely unlike any other original design for Baroque cities of the time. In Mardel's proposal, this also happens, but it goes a step beyond: the empty space, the opening of the field where one seeks to establish and to create the expectation for the new view of the city, is located in the water. The river is the central feature of this landscape. And it is from the river, the best view of the city turned spectacle.

Through Mardel's proposal, Lisbon would also have its “edified theater curtain” – the *Teatro Ribeirinho Lisboeta*, similar to the *Teatro Marittimo di Messina (Palazzata)*. The proposal takes advantage of the amphitheater position, the excellent physiography, favouring the view from the river, from South to North. The great view from the river, added to excellent views of the river, clean waters, healthy air and a substantial sun exposure, create a scenario of exceptional maritime and fluvial dynamics. This architecture never materialized



– it remained an idealization. However, the design drawn as a project, allows us to extract the ideas and ideals behind the plan – it can be seen as a preservation of the design process, as an urban architectural unit, which was established before the 1755 earthquake and materialized after it, with the development of the plan for the Baixa Pombalina area of the city. We would highlight the fact that Carlos Mardel, who drew up the 1733 Plan, was a member of the team of architects who won the competition for the *Baixa* plan.

Carlos Mardel's plan for Lisbon's waterfront was, perhaps, the last opportunity for a city design parallel to the river. This water-city proposed design, where the water is the pivotal element of the design, could be called "*urbemariamism*": a term that results from the fusion of the words *urban* and *maritime* (meaning the water of the river and of the sea). The waterfront is, undeniably, the defining element of this projected new territory. The architect combined the traditional linkage between Lisbon and the water, with an extraordinary technical innovation – in the national context of the time – of great impact on urban morphology. The result would be a continuous front of buildings parallel to the water.

At the same time, there is a new image established for the city, along with an "event" – something unique in the urban context, a phenomenal scene, a *happening*: two built-up urban fronts, where the river component is defined as an intermediate element; keeping the riverside dynamics active between the two urban fronts – as if it was separating two realities of the same city, old and new. The old and the new Lisbon are connected by the dynamics of the tides.

Mardel's plan addressed the problems of the time, in light of the city's irregular waterfront situation, as well as the deficit of port infrastructures that hampered the huge flux of maritime trade into Lisbon; the sustainability of the old riverside was thus ensured and a new urban dynamic that was rather innovative and advanced for its time was created. This new approach to the problem of the water connection allowed the new urban environment – "the new Lisbon of the West" – to establish a form of urban sustainability consisting of different factors and functionalities which had thus far been lacking, both jointly and individually. Here, naval, military, commercial, residential, leisure and recreational aspects would be brought together and combined in a single plan.

The project reflects the understanding of the traditional city, its characteristics and its potentialities, as a scenographic support for a new image of the city. The innovation also lies in the form of appropriation of an erratic territory, transient in terms of its rhythms and its dynamics. As a solution, the plan assigns it a uniform, ruled, clear reading character, supported by a geometrized, linear and organized form; which, in turn, enables contemplation and an urban spectacle through a new front of palatine water – worthy of the capital of a Maritime Empire.

#### REFERENCES

- [1] Kubler, G., *Portuguese Plain Architecture – Between Spices and Diamonds, 1521–1706*, Wesleyan University Press: Middletown, Connecticut, 1972.
- [2] Norberg-Schulz, C., *Baroque Architecture*, Fantonigrafica – Industrie Grafiche Editoriali S.p.A.: Venice, Italy, 1971.
- [3] Argan, G.C., *La Europa de las capitales*, Skira-Carrogio Ediciones: Barcelona, Spain, 1965.
- [4] Araujo, R., *As cidades da Amazônia no Séc. XVIII – Belém, Macapá e Mazagão*, FAUP Publicações: Porto, Portugal, pp. 31, 39, 1992.
- [5] Carita, H., *Lisboa Manuelina e a formação da Época Moderna (1495–1521)*, Livros Horizonte: Lisbon, Portugal, p. 193, 1999.



- [6] Pereira, P.J.G., *Lisboa – Porta do Mundo*, p. 56. [https://www.academia.edu/7423872/LISBOA\\_PORTA\\_DO\\_MUNDO](https://www.academia.edu/7423872/LISBOA_PORTA_DO_MUNDO).
- [7] Rossa, W., *Fomos condenados à cidade – uma década de estudos sobre património urbanístico*, Imprensa da Universidade de Coimbra: Coimbra, Portugal, p. 365, 2015.
- [8] Sylva, F.X., *Elogio Funebre de D. João V.*, Regia Officina SYLVIANA e da Academia Real: Lisbon, Portugal, p. 85, 1750.
- [9] Rossa, W., *Além da Baixa, indícios de planeamento urbano na Lisboa setecentista*, Ministério da Cultura – IPPA: Lisbon, Portugal, p. 30, 1998.
- [10] Manfredi, T., *Prospettive dal Tejo. La nuova Lisbona di Giovanni V in tre vedute di Filippo Juvarra*, *ArchHistoR*, No. 7, Università degli Studi Mediterranea di Reggio Calabria, pp. 10–15, 2017. <http://pkp.unirc.it/ojs/index.php/archistor/article/view/231/207>. Accessed on: 15 Jan. 2021.
- [11] Raggi, G., *Filippo Juvarra in Portogallo: Documenti inediti per i progetti di Lisbona e Mafra*, *ArchHistoR*, No. 7, Università degli Studi Mediterranea di Reggio Calabria, p. 45, 2017. <http://pkp.unirc.it/ojs/index.php/archistor/article/view/222>.
- [12] Sutura, D., *LEXICON: Storie e architettura in Sicilia (Messina tra Seicento e Settecento)*, No. 1. *L'Iconografia del Palazzo Reale di Messina*, Edizioni Caracol: Palermo, Italy, pp. 49–51, 2005.
- [13] Sansone, S., *La reggia di João V di Portogallo. Il progetto per Buenos Aires a Lisboa. Filippo Juvarra 1678–1736, architetto in Europa*, vol. 2, Campisano Editore: Rome, Italia, p. 205, 2014.
- [14] Ribeiro, D.M., *A Formação dos Engenheiros Militares: Azevedo Fortes, Matemática e ensino da Engenharia Militar no século XVIII em Portugal e no Brasil*, Tese de Doutorado, USP-FE: São Paulo, Brazil, p. 72, 2009.
- [15] Vasconcelos, F.T. de M., *Carlos Mardel – elementos para a história da arquitectura portuguesa do Século XVIII*, Tese de Licenciatura: Lisbon, Portugal, 1955.
- [16] Manfrè, V., *La Sicilia de los cartógrafos: Vistas, mapas y corografías en la Edad Moderna. Anales de Historia del Arte*, **23**, pp. 79–94 and 81–87, 2013. DOI: 10.5209/rev\_ANHA.2013.v23.41903.
- [17] Carita, H., *Dois Alçados Inéditos Do Palácio Real De Campo De Ourique*, Estudos de Lisboa, *Revista de História da Arte* n.º 11, Instituto de História da Arte, Faculdade de Ciências Sociais e Humanas – FCSH-UNL: Lisbon, Portugal, pp. 192–194, 2014.
- [18] Toussaint, M., *Da Arquitectura à Teoria – Teoria da Arquitectura na Primeira Metade do Século XX*, *Caleidoscópio*: Lisbon, Portugal, pp. 28–29.
- [19] Lopes, A. & Ferreira, C., *The Planned and Untold Story of the City's Architecture – the Pre-industrial Plan for the Riverside Boundary of Lisbon: Materialized and Remaining Aspects of Carlos Mardel's Plan from 1733*, vol. 191, WIT – Structural Studies, Repairs and Maintenance of Heritage Architecture XVI: Brussels, Belgium, pp. 91–92, 2019.
- [20] Lamas, A., *A Casa-Nobre de Lázaro Leitão, no Sítio da Junqueira (extra-muros da antiga Lisboa)*, Imprensa Lucas: Lisbon, Portugal, pp. 56–59, 1925.
- [21] Murteira, H., *Lisboa, da Restauração às Luzes*, Editorial Presença: Lisbon, Portugal, p. 103, 1999.
- [22] Tavares, D., *Guarino Guarini – Geometrias Arquitectónicas*, Dafne Editora: Porto, Portugal, p. 107, 2010.
- [23] França, J.-A., *História da arte em Portugal – o Pombalismo e o Romantismo*, Ed. Presença: Lisbon, Portugal, pp. 13–14, 2004.
- [24] Garcia, A., *Espaço Cénico, Arquitectura e Cidade – Guimarães, Um Modelo Conceptual*, *Caleidoscópio*: Lisbon, Portugal, 2016.

