

## **Contributions to the study of urban morphology: morphological, typological and landscape interrelationships in Brazilian Jesuit architecture**

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**Abstract.** *The hypothesis put forward in this article is based on the possibility of Jesuit architecture, in particular, located in Brazilian territory (16th century), and brokering dialogue built on the same body, and interrelated manner, aspects of urban morphology, typology and landscape. Lamas explains that, as a discipline, urban morphology adds to itself not only the built environment, but the means by which this was built in its interaction with urban form, ie "social phenomena, economic and other engines of urbanization" (LAMAS, 1992). Understanding the urban form is to understand its elements, "both in order to read or space analysis both in order to design or production" (LAMAS, 1992). Studying urban form means understanding where it enters the city and its constituents, its spaces and the interrelation between them and their context in a comprehensive spectrum of what is called the city and urban. The architectural typology and urban morphology are connected at the heart of their analyzes, whereas both, according to Pereira, studying "two orders of homogeneous facts" (PEREIRA, 2012), studying the components of the city - architectural and spatial - that overlap or complement according to the scale of analysis used. The Jesuit colonial architecture models Brazil, in a decisive way, the construction of distinct urban cores originating in the Brazilian coast in the sixteenth century. This by deploying edilicia typology accompanying the Jesuit doctrine of location and site selection for its buildings, recommending security, visibility and ease of access around rivers or the sea. These constructions carried out on elevated areas marked in time and space the landscape of the first Brazilian urban core.*

*Key Words: urban morphology, typology, landscape, architecture jesuit; Brazil*

### **Introduction**

The city as a center of human culture builds great narratives of architecture and urbanism over the time<sup>1</sup>. These narratives are cultural products that communicate and translate to a greater or lesser extent, as time passes, the quality and shape of the space and the landscape is constantly changing and reframing their content, mostly cultural. In this article, the typological analysis reaches its understanding from the articulation with the urban and landscape morphology. So comes the understanding of the transformations of cultural content of a given time and place, or even changes the meanings of such content. Therefore, the inclusion of the landscape as part of the typological study is relevant. Besides the typology and morphology, include the landscape as one of the narratives of architecture and urbanism, which helps in translating the object of analysis on canvas, provided that such narratives are hinged together. As Milk (1991) explains, the landscape changes constantly as the prevailing cultural content. However, when inserted in the urban environment, binds temporally morphology and typology. At the same time, the construction of the connect type urban form, or morphology of the city, also constructs the image of the city in specific time and space. The landscape under the parameter of urban development complete the history of the city, constituting perhaps one of his most compelling narratives.

Therefore, this article proposes to elucidate the connection between three major narratives of architecture and urbanism - the typology, urban morphology and landscape - and as a last level, investigates the role of architecture in the constitution of the city, taking the type as conductor

initial analysis. Assume, therefore specifically, the study of Jesuit architecture implemented in Brazil in the XVI century, the understanding of spatial relationships that surround it. It is about seeking to elucidate the morphological construction of Brazilian colonial city through typological analysis of Jesuit buildings in an attempt to understand how this typology interferes, builds, rebuilds and replaces landscapes, in different times and spaces.

The Jesuit architecture in its European origin, introduces new aspects in the typology of religious architecture, reflecting the *modus operandi* of this order itself. Founded in 1540 by Father Inácio de Loyola<sup>187</sup>, the Society of Jesus is characterized as an effective religious arm of the Catholic Church, to act directly on the catechized peoples and for those that will be catechized, imposing and adapting itself to new cultures that are the incursions of Portuguese overseas trips of the XVI century.

Patetta in citing Alois Riegl, explains that the birth of the Society of Jesus himself comes against political Counter-Reformation of the Catholic Church (Patetta 2012), in his political-religious struggle against the advance of Protestantism over the Christian world, and primordially on the new world discovered by the great navigations, initiated in the late fifteenth century. On behalf of the Church of Rome, the first Jesuits arrived in Brazil in 1549 - almost ten years after the creation of the Order - as part of a new crusade (Ribeiro, 2006).

The partnership between the Portuguese Crown and the Church, especially through the Society of Jesus - not forgetting the role of other religious orders - induces the mode of occupation of Brazilian lands. According to Freyre, unlike the occupation of other American colonies for Spanish, English and French, the Portuguese colonization is characterized by being more open to foreigners, importing only the settler who arrived was of "faith and Catholic religion" (Freyre 1999 : 29).

Carvalho says in his work of catechize the "Gentiles" (Carvalho, 1982: 11), the Jesuit Order has in its doctrinal basis fixation on earth through the creation of religious buildings in urban centers have started as villages or seats of captaincy or the creation of new urban centers such settlements and missions. These centers would be the radiators of the Catholic faith in new lands. The Jesuit installations serve to both the Indians as legitimate or interracial children of Portuguese with Indians (Carvalho, 1982).

The first decades of colonization still had in the presence of the Jesuits the power of the first laws, which required control of European culture on the social, economic and spiritual life of the Indians and settlers. Specifically on the Indians, this culturalisation on European molds occurs in Jesuit domains in their properties deployed on Brazilian ground. Freyre discern how the Jesuit European cultural influence was, in his words, "deleterious" to the indigenous culture, to a greater or lesser level. In the Jesuit missions and settlements in accordance Freyre (1999: 153), "the assembled Indians out of their system and integration with nature" are segregated and protected from slavery and European settlers, but are integrated in a artificialized life transformed into men and women "incapable of have independent living and natural development", concludes the author (Freyre, 1999: 153).

Different situation, or more "friendly" as Freyre explains, for those who "enjoy missionary work, not with eyes of devout apologist or sectarian Society" (Freyre, 1999: 152), there is found among Jesuit colleges, where instead of segregation, the children of Indians or already mestiçados are treated as equal to the sons of Portuguese settlers. The central courtyards of the colleges were the meeting place of the two "races" of dominant and dominated, says the same author, "meeting and amalgamation of indigenous traditions with European; trading toys; word formation, games and crossbred superstitions" (Freyre, 1999: 153).

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<sup>187</sup> Officially as a religious order linked to the Catholic Church, the creation of the Society of Jesus was given by the Papal Bull *Regimini militantis Ecclesiae*, of September 27, 1540, signed by Pope Paul III. See in particular: Oliveira, Beatriz dos Santos. *Espaço e Estratégia considerações sobre a arquitetura dos jesuítas no Brasil*. Rio de Janeiro: José Olympio / Uberlândia: City Hall, 1988: 17.

### **Jesuit typological references: hypothesis of its origins**

For Costa, the "modern, post-Renaissance and Baroque" jesuit spirit (Costa, 1941: 10) is unmistakable part of the Order, both in their doctrine as in their art and architecture, even if that has passed in the centuries by changes in their aesthetic, technical and formal patterns. Born in the first decades of the century XVI, in the ends of the art and architecture Renaissance (Costa, 1941), their constructions of this first century are characterized by "programs" and "aesthetic guidelines", called by Patetta of "pauperism" (Patetta, 2012: 390). It is the art and architecture as an expression of faith by unassuming, dedication and self-sacrifice, discipline and order of religious life, says the author.

The stylistic flexibility of the Jesuit production determined that its art and architecture were opened to "mannerism experimentalism, until the formal and decorative triumph of Baroque in the century XVI and the Rococo in the next century "(Patetta, 2012: 390). And further, this flexibility has enabled the Jesuit art and architecture to "adapt to historical situations, cultural developments and the conditions of society" (Patetta, 2012: 391), not retaining on styles, but in local and symbolic needs. To Patetta, in fact, this flexibility or adaptation expresses a "typological experimentalism" (Patetta, 2012: 391), characteristic of this religious order, making it impossible to disassociate their architectural production of their typological historical experiments:

(...) It is not possible to talk about of the "jesuit architecture" without discern between a first period, of the century XVI, characterized by typological facilities and very simple, austere and functional decorative apparatus (in which utilitas and firmitas relied more than venustas); a period between the century XVI and XVII which saw the foundation of important head offices and typological pontualização of the great collegiates complex; a third period (the full century XVIII) based more on the decorative finishing of buildings and scenic than the new foundations (Patetta, 2012: 391)

Such adaptation of the arts and Jesuit architecture to "physiological" changes, as Costa (1941) explains, are only enhance the brand or the "cachet" of this intense production that spreads around the world adapting according to the "conveniences and local resources and style characteristics specific to each period "(Costa, 1941: 10). It made that Jesuits would be different from other stricter Orders in their doctrines, and at the same time, established his identity to them.

Typological origins of Jesuit architecture in Brazil date back to the creation of the Order in the European context, its architectural reference, or references, that represent the expression of its doctrine and ideal of evangelization. This article, in front of studies on a variety of sources, pointing assumptions that, if they are not distinct, may in the end, they can be complementary for the recognition of the origins of architectural typology of the Society of Jesus in Brazil.



**Figure 1. In the center, the Monastery of Santo Antão the Elder inserted into the fabric of the city of Lisbon. Source: Google Earth, 2014.**

Both for as to Carvalho Gonçalves, for example, the Society of Jesus has in the medieval monastery of Santo Antão the Elder, in Lisbon, his first architectural experience (Figure 1 and Figure 2). The Company was established in 1540 and the monastery was received as donation from the Portuguese Crown in 1542 (Carvalho, 1982; Gonçalves, 2014). King João III, indicated by previous years (Gonçalves, 2014), receives and installs in Portugal two brothers of faith of Inácio de Loyola - Francis Xavier and Simon Roberts - arriving in Portugal in 1540. Two years later, a small group of Jesuits along with Simão Rodrigues, settles in Santo Antão the Elder "in full Moorish lisboeta" (Gonçalves, 2014: 96). Do this, their first home (Carvalho, 1982) and the basis for the Order be established in Portugal. Santo Antão along with the construction of the College in Coimbra (1548), the later works of the College of the Holy Spirit of Évora (1551) and the Professed House of São Roque (1553), became typological references for future religious works of the priests in Brazilian lands<sup>188</sup>



**Figure 2. Picture in elevation of the Monastery of Santo Antão, the Elder, in Lisbon.**  
**Source: Google Earth, 2014.**

Francisco Rodrigues, cited by Carvalho (1982), points out in his report the architectural features of Santo Antão, which define the building typology of another Jesuit buildings since their beginnings<sup>189</sup>: from the concierge, can get to a cloister or "square courtyard" (Rodrigues *apud* Carvalho, 1982: 23) made up of pillars supporting a balcony surmounted and skirted around the patio; the central courtyard, a well water for daily services; upstairs, the bedrooms and support rooms that completed with atelier and another rooms from the ground floor. The building is closed on a court with a small church "devout and collected" (Rodrigues *apud* Carvalho, 1982: 23).

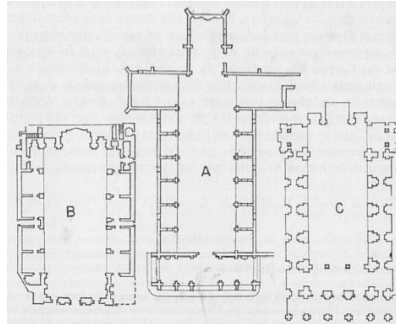
For Santos (1966), however, the typological origins of Jesuit architecture found itself in the first churches built by the Society in Portuguese land under foreign influence or not<sup>190</sup>,

<sup>188</sup> In the rapid expansion process, the Jesuit buildings spread over several Portuguese cities from the second half of the century. XVI, reasserting itself in Portuguese territory, while they advance on other provinces, in Europe, coming to Africa (Congo, Angola, Mozambique, Ethiopia, Cape Verde and Guinea), Asia (India, China and Japan) and new World of the Americas. See in particular: GONÇALVES, Nuno da Silva. Baltasar Teles, Cronista da Companhia de Jesus.. Available at: <<http://ler.letra.up.pt/uploads/ficheiros/5270.pdf>. Accessed on 16 Jan. 2014.

<sup>189</sup> Santo Antão overcomes its importance as the original site of the Jesuits. At the end of the sixteenth century the monastery with his high school constitutes an important place for teaching basic fortifications taught by Jesuit priests who combined in their classes, the religious basis with technical education, the training of future military engineers of fortification, "making them respected as intellectuals, writers, professors of mathematics and other activities" (Oliveira Ribeiro in 2013: 54). Inside the Jesuit Order itself existed priests who beyond assume their cassocks and religious functions, were dedicated to studies and craft of military engineering, also acting on Brazilian ground (Ribeiro, 2013; Oliveira, 1999).

<sup>190</sup> See in particular the work of Santos on the "autochthonous" and foreign hypotheses buildings of Portuguese Jesuit architecture, mostly Italian, from the mid-sixteenth century. Santos, Paulo (1966). Contribuição ao estudo da arquitectura da Companhia de Jesus em Portugal e no Brasil. V International Colloquium on Luso- Brazilian Studies Coimbra: 19-30.

especially in works of the College Church of the Holy Spirit of Évora (1551) and Professed House and Church of São Roque in Lisbon (1565) (Figure 3). From the two, according to Santos, the most important for the Brazilian story is that São Roque, in addition to becoming one of typological reference architecture Portuguese Jesuit, had his foreman, the architect Francisco Dias, sent to Brazil<sup>191</sup> for the construction work of the colleges of Bahia, Olinda and Rio de Janeiro (Santos, 1966), since the last decades of the sixteenth century.



**Figure 3. Schematic plans of Churches (A) of San Francisco in Evora; (B) of San Roque in Lisbon (1565) and (C) of the Holy Spirit Church of Évora (1551). Source: Santos, 1966.**

Studies indicate, however, that only at the beginning of the construction of the Church of Gesu in 1568, with its professed house in Rome, originally designed by Vignola and completed by Giacomo Della Porta and Girolano Rinaldi<sup>192</sup> in 1575 (Capitel, 2005), that Society of Jesus has its "mother church", Patetta argues (2012: 391). The Vignola's Gesù is not complete before, however, of two projects with plants attributed, firstly to Nanni di Baccio Biggio in 1550 and subsequently a second project attributed to Michelangelo in 1554 (Santos, 1966). In both projects, the cornerstone of the start of construction is launched, but only the Vignola's project remains as final. In projects of Biggio, Michelangelo and Vignola - three architects of "universal renown" (Santos, 1966: 16), have variations of the same type of cross and longitudinal plan (Figure 4), with her arms a little more or less indented; side chapels along the unique nave and chapels in the background, on the side of the altar and apse closing a greater or lesser proportion the end of nave's perspective, embracing the altar (see Santos, 1966 Tábuas VI).

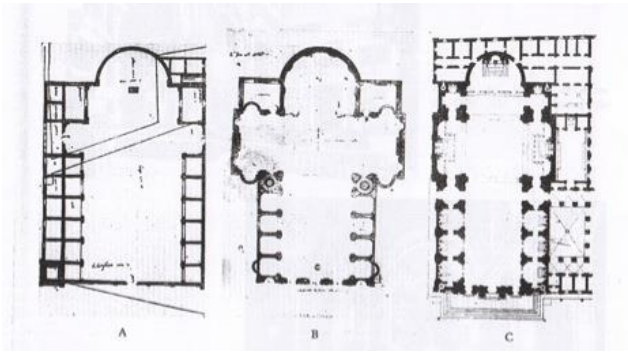
The construction of Gesu (Figure 5) happens in a singular moment in urban history of Rome, and to the very concept of city and western architecture. To Argan (1999), it is the construction of humanist culture throughout the fifteenth and sixteenth centuries in Europe, which brought a new vision of the city, based on the organization of its urban space, the definition of its functions and the creation of a defining architecture and urban space defined itself<sup>193</sup>. Gesù

<sup>191</sup> To Lúcio Costa (1941), the importance of the architect Francisco Dias extrapolates the limits of Jesuit architecture built or helped build in Brazil. As an architect, his performance in Brazilian lands has featured in the spread and development of the architecture of the early colonial Brazil.

<sup>192</sup> According Capitel (2005) is attributed to Rinaldi the charge for completing the Jesuit complex of Gesù, projecting their professed house and closing the occupation of a large block of irregular design of the city of Rome. Della Porta takes and completes the design of Gesu after the death of Vignola (Santos, 1966).

<sup>193</sup> The humanist city, according Argan is a rational conception, derived from the will of a prince by the hand of an architect, base of humanism to be "lay, bourgeois and urban" (Argan, 1999: 58). These urban changes are part of a complex of social, economic and political changes that redefined the central role of European cities in the known world of that age. Part of this urban transformation focuses on the prominence of the architect as part of the explanation of Argan, the "bourgeois split of the city" (Argan, 1999: 58). The liberal, highbrow arts are distinguished from their mechanical and legwork to be created elites of artists who work directly to meet the artistic and urban demands of this new vision of the city (and its sovereign).

therefore born under the aegis of an architecture focused on practicality and adaptability of architectural compositional possibilities, with the city and its urban fabric as a background.



**Figure 4. The three plants Gesu of Rome, assigned respectively to the Nanni Baccio Biggio (1550), Michelangelo (1554) and the conclusion in 1575, from the design of Vignola (in the picture the plant appears to work as part of its Professed House). Source: Santos, 1966.**



**Figure 5. In the center, the Church of Gesu in Rome, with its Professed House shutting in type of court. Source: Google Earth, 2014.**

If the Renaissance architecture is governed by a rational ordering of your speech, translating their own faith as part of this new environment, Gesu and later religious architectures, discourse is now clear, second argument of Brandão (1999: 128): an artistic "anti-intellectualism" and "approaches everyday," demonstrating the power of faith over men, having their art as marketing. In fact, the art this time is no longer the middle of the speech, the ideation of the Catholic faith, from itself to be the ultimate representation of the very power of the Church.

This is reflected in the architecture developed by the Jesuits in their expansion across the world. In its origin, is characterized as a mixture of austerity and introspection around a central courtyard, the molds of Santo Antônio, and the Professed House of Gesu. However, while the typology expresses the architectural and urban brand of the Church presence on earth. Initially assuming this austerity, the Brazilian Jesuit architecture accompanying with the passage of time the ideal of aggrandizement of religious space by the art, mainly represented in the work of the panels richly ornamented, represented in the classic text of Lucio Costa, 1941, on the Brazilian Jesuit architecture. In summary, in a range of less than 30 years between the acquisition of the monastery of Santo Antônio and the construction of the Gesu, the architecture of the Society of Jesus establishes the beginnings of its build typology. Based on a flexible and adaptable type,

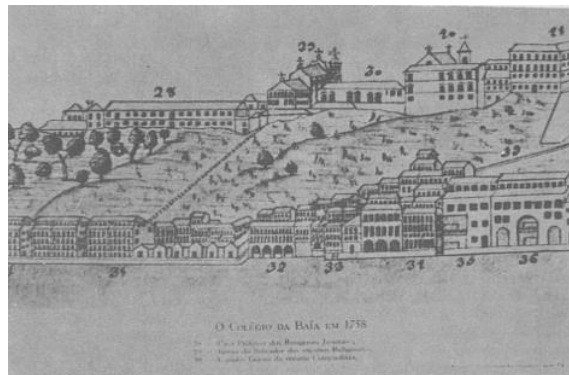
functionality and meets the symbolism of faith and the power of the Church, while it is ultimately the representation of European culture outside their continent.

### **Typological origins of Brazilian Jesuit architecture: the church, the fence, the court and the courtyard**

As mentioned earlier, the power of the Catholic Church in colonial Brazil was present, primarily through the Jesuit order, one of the first to arrived in Brazil on an unquestionably way. Their religious buildings mark the virgin and untouched kind of the first centuries of Portuguese colonization of Brazilian lands. Deployments of Jesuit buildings, always it can, seek for strategic places on the land to be catechized, regardless of the large availability of land in the early days of Brazilian colonization. According to Carvalho (1982), the Jesuit religious buildings seek a middle ground in the occupied territory, among the first villages of Portuguese colonization and indigenous villages, the latter being his main target for Brazil. Still according to the same author, the proximity of the Jesuit religious complexes with the Portuguese urban cores is providential, because of the eminent growth of the first urban centers in Brazil. Thus, the Jesuit buildings would be in "civil action center to better exercise their religious activity" (Carvalho, 1982: 25).

From there, the places chosen for the construction of their religious complexes are defined primarily by their position in relation to the environment (Figure 6) and, not least important, by the ease of roaming about the territory to be catechized:

Thus, the location of Jesuit buildings in Brazil was almost always on the highs, with beautiful views over the sea and next to a river. The proximity of another building warranty Jesuits easy locomotion: an along the coast, for communication with other centers of catechesis and conversion; and another for the interior in search of Indians and the establishment of new settlements. And the elevation facilitated the defense, and the building itself, by itself, it stood as a fortress (Carvalho, 1982: 25).



**Figure 6. Drawing 1758 the Jesuit college of Bahia (BR) and its prime location relative to the sea. Source: Oliveira, 1988.**

Free visual obstacles, these high places - mostly - establishing control and dominion over the lands around them and the landscapes that form from the inevitable framing that the openings of the first religious buildings do to nature around. A form of occupation guided primordially on safety of the clergy and their aggregates, living around religious life of the Order. But at the same time, they reflect the human and foreign occupation in these virgin lands, creating, recreating and continually appropriating the surrounding and abundant nature, as part of daily activities, tasks and moments of seclusion of the Jesuits priests.

In a mix of religious building for teaching and dissemination of the Catholic faith and fortitude - place of safety for the community that there was forming - the Brazilian Jesuit architecture adopts formal and functional types that suit both the missionary purposes of the Order as the casualities those unexplored and wild places. The occupation of the land is done at first by the erection of temporary structures (Figure 7), namely: a rustic shelter, almost a hut without dividing the reference is built for exploring the surrounding territory in search of the ideal and to construct the final religious building, besides the first religious activities of the Jesuits in that ground (Carvalho, 1982).



**Figure 7. The construction of the Jesuit temporary shelter. Source: Najjar 2011.**

Chosen the place in the premises of service protection, location and presence between Portuguese and Indians, initiated up the works with the availability of materials and workmanship site. The definitive work, which was started by the construction of the church (Carvalho, 1982) should reflect the establishment and continuity of the activities of the Jesuit Order in Brazilian territory. In general, as Costa explains the Jesuit religious complexes in Brazilian lands were divided into three parts concerning their religious duties and day-to-day life of priests:

The program of Jesuit buildings was relatively simple. Can be divided into three parts: for worship, the church with the choir and sacristy; for work, classes and workshops; to the residence, the "cubicles", the infirmary and more service areas, beyond the "fence", with garden and orchard (Costa, 1941: 13).

This division of functions was present physical and symbolic form in its architecture: the church (with its sacristy), first building to be executed of the final building, marked the place. It was the church who carried the Christian symbols of the Rome Church and represented, ultimately, European architectural culture that moment. The fence, where was the orchard and vegetable garden or as well as, sometimes, the water well is discordant point between some authors because their position and existence<sup>194</sup>. Carvalho indicates the presence of the fence, as reserved space to the livelihood of the priests in their Brazilian complex, and the social and symbolic distinctions of the same, as illustrated below:

In all these buildings were almost always a 'fence'. There were cultivated fruit trees, vegetables, aiming to help the maintenance of the inhabitants of the residence or College. This kind of orchard was fenced (there, the name 'fence'), and Inácio de Azevedo, when he visited in 1568, has forbidden women to enter there, even for cleaning and should be made this deal with men who could hire women to work, but whose entry would be on the outside, not through the Jesuits house. (Carvalho, 1982: 27).

The Carvalho's definition complete what Lucio Costa, quoted above, states the fence as an important part of the Jesuit religious buildings. Cardim describes the College of Salvador in Bahia, 1583 (see Figure 6), with its extensive fence and its access to the sea: "The fence is very large, it hits the sea, in its inside priests will embark, has a perennial source of good water, with

<sup>194</sup> See as an example NAJJAR Rosana (Jan.-April 2011/2001). Para além dos cacos: a Arqueologia Histórica a partir de três superartefatos (estudo de caso de três igrejas jesuíticas). Boletim do Museu Paraense Emílio Goeldi. Ciências Humanas, vol. 6, n. 1: 71-91.



your tank ... "(Cardin *in* Santos, 1966 note 3: 50). Therefore, the fence conforms with an external place to the building of the Jesuit complex. Even after completion of the building, about the place serves the livelihood of the Order, through the gathering of fruits, vegetables and other plant products, in addition to housing a water well - in some cases - for the supply of the building (Figure 8). In Carvalho's explanation, the fence is not a constant in all Jesuit buildings because it demand, like the rest of the complex, material support and labor to do it.



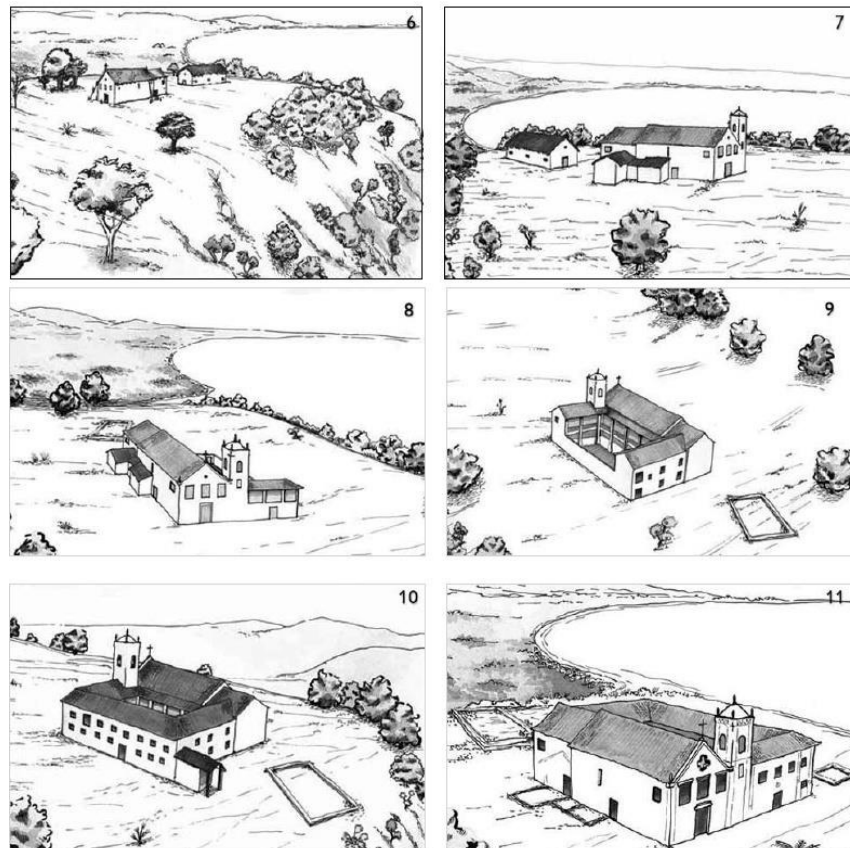
**Figure 8. Detail of the Jesuits property situation in Vitória city, capital of the state of Espírito Santo (BR), in a survey done in the eighteenth century by the military engineer José Antônio Caldas. The building of São Tiago (Ca) complex and the layout of the fence demarcating the Jesuits property. Source: Miranda Ribeiro and Pessoti in 2011 Edited by the author.**

In the Jesuit religious architecture the typology repeats in a mixed of physical protection and sacred. The architecture is built at the same time, bound and limited by no more sacred representation of some pagan god, as Fustel de Coulanges (2004) explains, but the Christian God, his church and his clergy. It is Temple and home; palace and fortress; housing, shelter, garden and place of worship and God's presence in new lands. Outpost of the Church, organized and representative of European culture, its architecture superior technical quality, complex compositions and striking symbolism differ it of the surroundings built and natural, becoming, in the town or village, the main building of the early occupation of Brazilian urban centers.

The Jesuit typological complex with its “quadra” (court)<sup>195</sup> format is organized by complementary parts, with marked functions, spatial and formal hierarchies: the court frames the courtyard, while the patio conforms to the block. Both have a higher limit on the fence (regardless of its format and concept), and the church, where was everything began.

<sup>195</sup> This article follows the term used by Lúcio Costa in his article about jesuit architecture, 1941, to meaning the regular design typical of brasilian jesuit buildings, made by parts with its functions and specific uses that was modeled by the local relief, started always by the church construction that's used to close one of the parts of the block as one of its sides. And at the end, when finished, it give form to the typical brasilian jesuit architectural building. As a rule of translatio, it was chosen to translate the term “quadra” to the english “court” because its proximity with “courtyard”, because of the “quadra” sides that surrounded the central courtyard.

The Jesuit court presents interesting constructive process (Figure 9) therefore creates over time of its execution, historical relations with the urban evolution of the place itself, gradually and slowly, shaping their place of deployment, with characteristic morphology and distinct from civil buildings of that time. Also impressive for its size, height and strong impact on the local environment because it constructed at this time the beginnings of a distinctly urban landscape on the natural landscape.



**Figure 9. The form of Jesuit occupation: following, the church building, the main building, and then the continuous process (which could take centuries or never be completed or executed) the closure of the court and the formation of the inner courtyard. Source: Najjar, 2011.**

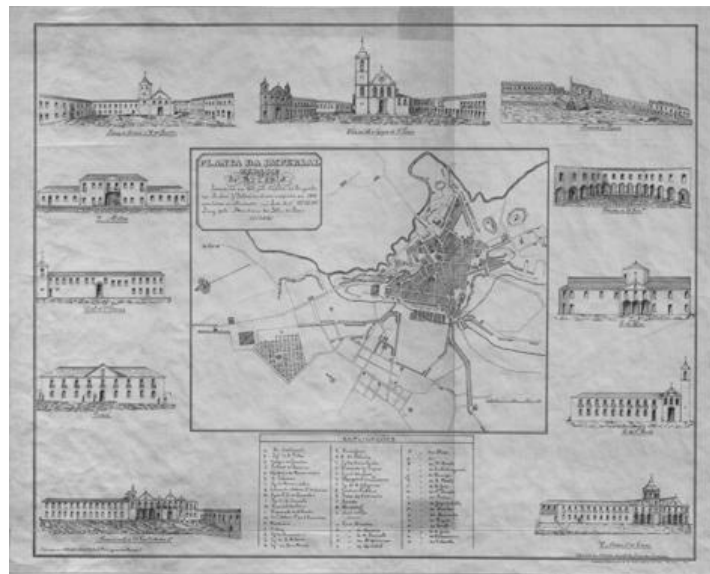
The houses, schools and residences are typical Jesuit establishments of the fixation of the Order in Brazil<sup>196</sup>, and its center of "raid" for catechesis of the Indians (Carvalho, 1982). The

<sup>196</sup> Santos (1966) lists the Jesuit buildings and their functions installed in colonial Brazil, which were not limited only to education and faith: "Among the establishments founded included: for education, homes, residences, schools, and seminaries; for catechesis, missionary villages; for the treatment and retreat, the halfway houses or Thursdays of rest, mental hospitals, gatherings, hospitals; and religious preparation, novitiates, where the waves of soldiers leave for his army. Because in fact they constituted an army, even if surprisingly brief given the magnitude of the work undertaken - work more than educational and catechetical, because it starts of the colonizing action itself, built at the best clay - the education and faith. "The farms, barns and mills built by the Jesuits, as the author explains, emerged as a way to aid in the costing of the Jesuit work in Brazilian lands. See in particular: Santos, Paul (1966). Contribution To The study of the architecture of the Society of Jesus in Portugal and Brazil. Coimbra: V International Colloquium on Luso-Brazilian Studies.

differences are related to their function within the Order, but because of an urgent needs of the spread of the Catholic faith in Brazilian lands invariably it takes education as a priority function. These Jesuit establishments are defined based on their location and function, according to Carvalho explains:

The building built in the main portuguese village of a captaincy was always the headquarters for raid operations inside in search of native villages for future settlements. In Portuguese village, the headquarters received the designation house when it was not able to perform the duties from the college, while establishments in settlements received the designation of residences (Carvalho, 1982: 20-21).

Carvalho explains that these differences between colleges and residences are in level of teaching that develop (Carvalho, 1982), colleges addition to being devoted to the teaching of reading and writing Portuguese and the indigenous populations of the colony, they also develop higher education facing training new missionaries in Brazilian lands (Carvalho, 1982). The settlements are formed by Jesuit residences, according to Carvalho, the way of the Order to keep the Indians catechized around and about its religious auspices. These were arranged along a large central square, opposite the church, in houses built by them constantly referred these back, as Carvalho explains, the image of the Indian village. But the great square beyond something aggregator it's the principle of being space and domain Christian and European discipline. At one end of the rectangle to conform the square, one finds the imposing church as brand of the new faith about the customs and traditions of the Indians.



**Figure 10. Plan of the city of São Paulo (BR), 1810, updated in 1841, with the following caption: "Plant of the imperial city of são paulo. Surveyed in 1810 by Captain Rufino J. Felizardo of Engineers e Costa in 1841 and copied with all changes. - Lat. South. 23°, 33' 30" Long. At the Meridian Iron Island 331° 24' 30". Above left, drawing the Jesuit College of St. Paul, considered ground zero of the city building. Source: Municipal Historical Archives of São Paulo, 2014.**

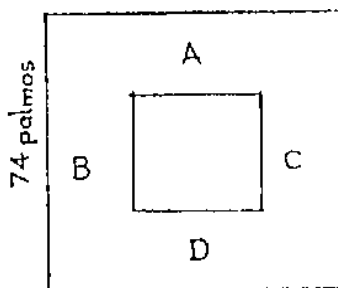
Therefore, in one way or another, the Jesuit Order is concerned to establish or participate in the creation of urban centers in Brazilian territory, such as the Jesuit College of St. Paul (Figure 10), based on a morphological type or constructive typology of urban proportions. As noted, the Jesuit buildings, originally, or were present in the Portuguese first urban cores, the headquarters or villages or the captaincies were in remote areas, however strategically close enough these towns and / or the Indians to be catechized. Its elevated position relative to the rest of the

territory<sup>197</sup> and next to the rivers or the sea ensure proper protection, and mobility needed for their evangelizing missions from inside the captaincy.

### The Jesuit typological composition: form, function and symbolism

The establishment of Jesuit buildings on the block should be the role of the court typology as a synthesis between architecture (building construction and urban and spatial occupancy) and urban morphology (or part of the urban fabric), introduced as an effective way that has adapted to the hardships of the new uncivilized and unchristian world, the example of colonial Brazil (Carvalho, 1982). This spatial organization that revolves around a central courtyard (Figure 11), open to the heavens, becomes its own form of organization of life and the daily lives of missionaries priests in Brazilian territory, adapting to the harsh and dangerous reality of early colony:

(...) This type of construction was very specific to the environment found in Brazil, since it presented an aspect of fortification, with few openings on the ground floor, in addition to entrance doors (sometimes one on each side of the court) and with freedom within the court where it stood all the movement of work (Carvalho, 1982: 24).



**Figure 11. In the picture developed by Santos, from the guidelines Nóbrega, according to Oliveira (.1988: 58), the division of the block for its main functions: A - wing of the church, first to be built; B - wing of priests and brothers, as his permanent home; C - wing of the young men; and D - ward services, the last to be completed. In the center courtyard typical of Jesuit architecture in court. Source: SANTOS, 1966.**

For Carvalho, the fact that brand building court in the Jesuits and what differentiates them from other religious orders is the appropriation that their clergy did the central courtyard (Figure 12 and Figure 13). The ordinary meaning of the religious orders was to give to the courtyard an aspect of place meditation, silence and introspection. But in contrast to the Jesuits, the courtyard was a place of service organization's day-to-day, especially in Brazilian territory, feature this, since this use of the Monastery of Santo Antão, the Elder, in Lisbon, as first home Jesuit.

The Jesuit courtyard expresses the "active life" (Costa, 1941: 23) of the Order, because different from the seclusion that the courtyard represented in other religious orders, the Jesuits was the place of moving priests in their daily educational, religious commitments and

<sup>197</sup> As Oliveira recalls, the case of the Paranaguá College, in Paraná, is the exception to the rule typological of the Jesuits in Brazil, citing Cardim, the priests have chosen instead to deploy his college in high place, a place close to the River Itiberê and "a little more than three hundred feet from the water source, the public fountain built in 1714, and where the ships that arrived at Paranaguá to supply of water" (Cardim *apud* Oliveira, 1988: 39). In explanation of the author, in this particular case of Paranaguá, priests exchanged protection for "extreme functionality" because of "proximity to the port, the trade area; place where we could embrace and therefore have strict control of the most significant events of the metropolis "(Oiveira, 1988: 40).

administrative, students and their banter and exchanges, support for everyday services complex. It was a lot of activities that the central courtyard of all this confluence, constituted in a "noisy creative center" (Carvalho, 1982: 24), because the buildings of the complex that revolved around this courtyard housed the classrooms, dormitories, workshops, administrative and support areas to school and church.



**Figure 12. Picture of the inner courtyard of the College and Church of St. Alexander, in Belém city (state of Pará). Source: Ribeiro, 1988.**

Instituted by the Company, thinking in problem solving "technical and economic in places of work, derived from inexperience" (Patetta, 2012: 393), it was created six plants of churches adaptable enough to adversity of each place, designed by architect Francesco de Rosis in 1580, for new buildings of the Society in the world at your fingertips<sup>198</sup>. Are variations of scale and proportion (Figure 14), in their dimensions, which refer to a first analysis, the design of the church of Gesù in Rome, with its unique longitudinal nave. But, within the types presented were two typological possibilities of plants with three naves, appearing to be extensions of the longitudinal side chapels. In all types was maintained the retracted transept and three apses at the bottom, with formal variations. According Patetta, these plants:

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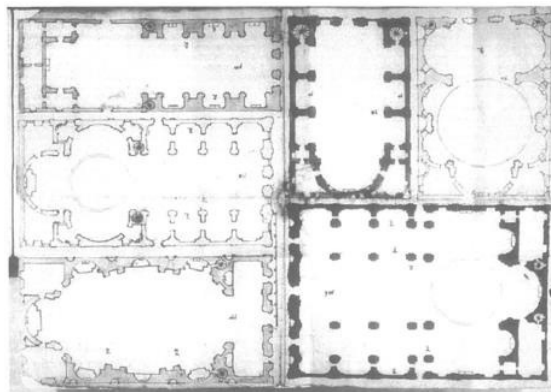
<sup>198</sup> Custódio in a concise outlines the organizational process of the Society of Jesus for creating your architecture to be propagated mainly by the New World. In addition to characterizing their architecture from the functionality of its buildings - the church building, place of liturgy and sacred buildings and the common use and services of the priests (the schools, homes and houses) - the Jesuit organization had need, along the sixteenth century, to establish roles technical and operational support for the construction of Jesuit buildings. The creation of the post of director of construction was important for the initial systematization of edilícia typology of the Society of Jesus. The first was Giovanni Tristano, a lay brother who worked beside Vignola in the Church of the Gesù, establishing the use of longitudinal plan as a single nave and a Latin cross. Others came replace Tristano's function, including Francesco Rosis, responsible for plant-type sent to the new churches.

Effectively, the systematization of the architecture of the Society begins to happen from the imposition of *Instructiones Fabricae et Supellectilis Ecclesiasticae* of 1577, creating the first general guidelines and standards for buildings, as Custódio says, "incorporating ideas drafters, without giving the necessary guidance of architects. "And how full the author, among the drafters of reference for the Society of Jesus are, Vitruvius, Cataneo, Vignola, Palladio and Serlio. It was based on the creation of the Common Rules of the Society, including the architectural, Rosis that creates the sixtype plans which spread the new territories catechized by Jesuit hand. Even though this organization held responsible by the Society at its beginning has been lost with time and lack of control, she was instrumental in creating and establishing the Jesuit identity in the new lands, through a typological construct that according to Custódio, "was the result of both expressing the functional needs as references to iconic works of architecture treaties and the contribution of professionals from different countries." See in particular: Custódio, Luiz Antônio Bolcato. *Diretrizes arquitetônicas e ordenamentos urbanos nas missões jesuíticas dos Guarani*. In: Souza, Luciene Pessoti de; Ribeiro, Nelson Pôrto (2011). *A construção da cidade portuguesa na América*. Pod Publisher, Rio de Janeiro, RJ.

(...) They reveal an elaboration of the original type with varieties of solutions either within the schema itself (elliptical plant with lateral chapels and atrium, plant with a central vain with dome and atrium), both in layout and depth of the side chapels, the apse and transept (Patetta, 2012: 393).

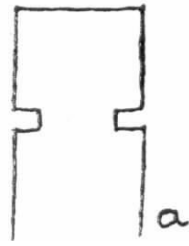


**Figure 13. Inner courtyard of the Church and Residence of Kings in Nova Almeida, Serra city (state of Espírito Santo) Source: Loc.alize.us, 2012.**



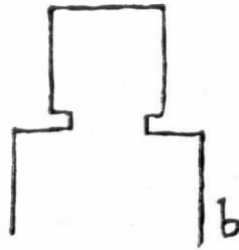
**Figure 14. Types of plants developed by De Rossis, 1580, to the Jesuit buildings. Source: Patetta 2012.**

For Costa, the typology of churches and their built complexes are architectural parties or "reference" (Costa, 1941: 23), adopted or created "by Jesuit architects, or laymen architects in the service of the Society of Jesus" (Costa, 1941: 23) that have influence and propagating in Brazilian Jesuit buildings. In Brazil, according to the author, are adopted by the Jesuits, four kind of plants which the single nave is the most used typology (Costa, 1941). Churches developed in these kind of plants differ by the degree of simplicity of its parts: the simplest, according to Costa (1941), the first to be built in Brazil, where the chancel and a single nave formed a single body (Figure 15), which were divided "conventionally into two parts by a cross arch" (Costa, 1941: 29).



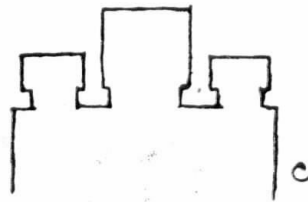
**Figure 15. Layout plan of the Jesuit churches of simpler type according Lucio Costa (source: Costa, 1941).**

A second typology, wider, according to Costa (1941), where the constructive simplicity still holds, but there is already a clear differentiation between the nave and the chancel (Figure 16), especially through the smaller dimensions of the latter in relation to nave (Costa, 1941).



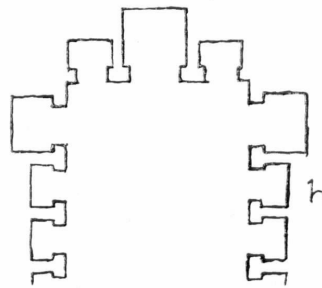
**Figure 16. Typology which the nave differs from the chancel (source: Costa, 1941).**

The third typology with larger churches, mainly from the seventeenth century, where the simplicity of the early days is mixed with more complex compositions (COSTA, 1941). In this typology, besides the characteristics of the former type, are increased side chapels on the chancel (Figure 17) "of greater or lesser depth" are added, according to Costa (1941: 31);



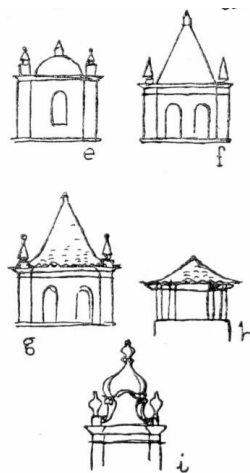
**Figure 17. Type of Jesuit churches where the simplicity of its architecture is mixed with more complex solutions (source: Costa, 1941).**

And the last type, the churches, as the author explains, are built under the influence of the church of the Gesù in Rome. In this type of church, in particular and the Gesù way, chapels spread along the lateral of the nave (Figure 18), each one with its specific altar. The greater detail is the two mirrored chapels that were closer and just below the chancel, for "they were almost ever wider and taller, if not also deeper, with that same goal to score, the plant, the cross" (Costa, 1941: 31).



**Figure 18. Type of Jesuit churches of greater complexity, based Gesu (source: Costa, 1941).**

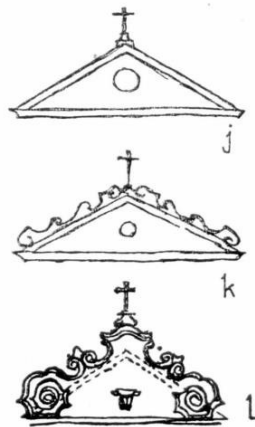
In most instances, was the presence of a tower that made up the whole and at the same time, separating the body of the liturgy - formed by the church - the body of the services and bedrooms, the latter on the college and other dependencies. The towers themselves were one of the striking elements of Jesuit architecture, with little time high in relation to the set in order to balance it between their horizontal and vertical proportions. But, according to Costa (1941) these were not always finished, and were only started after the expulsion of the Jesuits in Brazil (held in 1759), and finished "without regard then, (...) the characteristics of the original building" (Costa 1941: 24). Costa completes the analysis with other elements of architectural composition and construction techniques that close the typological characterization of Brazilian Jesuit architecture<sup>199</sup>: the use of eaves on their roofs against the excessive rains of the great in Brazilian territory; the roofs of the towers varied according to the constructive technique and the availability of material and labor in that place (Figure 19); the pediments of churches that in the first Brazilian churches even follow the Renaissance rigor, it enter the Baroque with more elaborate designs (Figure 20); portals that change in number according to the level of detail among the simplest sixteenth century churches until the most worked churches of the following centuries; and lastly, the wings that close the typology of the block with the church (Figure 21), more austere designs, giving due importance and hierarchy to the main church building.



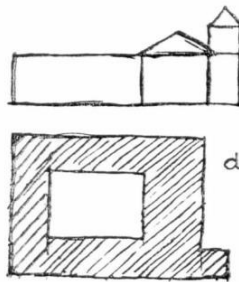
**Figure 19. Changes in typological roofing of the Jesuit towers.(source: Costa, 1941).**

<sup>199</sup> See in particular: Costa, Lúcio (1941). 'A arquitetura dos jesuítas no Brasil'. In: Revista do Serviço do Patrimônio Histórico e Artístico Nacional. Serviço do Patrimônio Histórico e Artístico Nacional/Ministério da Educação e Saúde, Rio de Janeiro.





**Figure 20. Typological variations of churches pediments, from the most simplified drawings even on Renaissance influence, to the most ornate the Brazilian Baroque period (source: Costa, 1941).**



**Figure 21. The court way and architecture in mixed of residence and fortress (source: Costa, 1941).**

The composition of the parties seeking a balance of shapes, volumetries at the same time that purposed the hierarchy of functions and meanings without losing the "visual unity of the whole" (Oliveira, 1988: 59). According to Costa, scenic construction extended into the interior of the church, the principal place of God's presence, joining the ritual and symbolism of the liturgy

The Jesuit church was a beginning and end, the building symbol of a new way to express and propagate the faith. Since the implementation of the building, with the choice of the ideal place, under the Jesuit security guidelines, visibility and ease of displacement; through its construction which marks the place and the landscape, reaching its way to transmit their faith by the symbolism embedded in its architectural typology, became the expression of this religious order throughout the centuries

In Brazil, it has become more prevalent in the urban establishment of several towns where the Jesuit Order settled, their buildings were mostly the buildings better finished, more volume and height. Both his buildings and the manner of their priests were, as Oliveira, direct way their relationship with society and its time explains:

The deployment location of the colleges at the heart of the urban core activities, on top of a prime elevation in the chosen place could provide the desired contact with society, the proximity needed to show them their dynamism, their intellectual erudition, his brilliance in various technical issues, their ability in practical matters, and thus their indispensability in the colonial urban daily life. Symbol of militant faith, these institutions only by its placement in

urbe, the sight of his austere elevations, were also a symbol of the new age of reason (Oliveira, 1988: 101-104).

The morphological type in Jesuit block shows the significance in the settlement and expansion in Brazilian lands. In different Brazilian cities, the Jesuits complexes - the church and the court - shape both the landscape rehearsing their urban beginnings as urban morphology, drawing and narrating for centuries, the image and the symbolic significance of the places. Elevated and highlighted from the environment, deployed at strategic locations for the domain and protection, the Jesuit complexes were invariably in their urban cores originating, one of the driving forces of urban expansion over the Portuguese colonization centuries, and even after the expulsion of Society of Jesus in Portuguese territory in 1759.

This way, the typology in urban scale, the Jesuits complexes were involved both in the construction of cities, defining, the priori, the scale of traditional block brought by Portuguese colonization, which was modeled by local relief and their conditioning, but also of its urban landscape - before, it was isolated as an architectural object, which by its own morphological characteristics were able to join the growing Brazilian urban fabric that expanded and diversified the long centuries. His typological flexibility adapted itself to the sinuous design of the first Brazilian cities, as was also able to change positions after the forced departure of the Jesuits. In major urban centers maintained their religious functions, in large majority, but in the hands of the government (Portuguese, Brazilian Empire and Republic) were adapting their duties to the bureaucratic requirements or turned into new symbols of power: the Church out, the State in. In extreme cases, like the ancient church complex and the College of São Tiago, in Vitória city, capital of the state of Espírito Santo, the change of political regime, raised a new aesthetic and a new image for the complex transformed into government headquarters - today, the current Anchieta Palace. The simple architecture of the early Jesuit sixteenth century no longer exist on the new composition of facades, volumes and eclectic decorative elements, the beginning of the twentieth century, also marking the new functions and internal reforms of the building.

One may consider that this is an architectural typology that crossed the country's urban history, experienced its transformations, being a fundamental part of the morphological and landscape constructions of these early urban centers, which can be understood as historical narratives, *princiadas*, largely by this typology.

## Notes

From that exposes Waisman (2013), the typological construct is a cultural process, due to the opening that the types have to external influences. To Waisman, while the type is the "principle of architecture" (Waisman 2013: 102) is also a "historical subject" (WAISMAN 2013: 102), given that in its essence the possibility of transformations, adaptations and "provide the basis for new inventions, maintaining, however, a continuity that could be considered structural basis" (Waisman 2013: 102).

This article seeks to integrate the typology study, from a new meaning their cultural content associated with urban morphology through narrow approach of Jesuit building in Brazil. It also argues that the typology exists only because of its relationship with the city shape, it is a constructive process of cultural projects, covering not only the urban fabric, but all the cultural content that surrounds or fenced throughout history. The type is, ultimately, a cultural and historical example of a moment, not as a model, but represents a not static historical moment, subject to modifications and changes in form, use and meaning moment. Thus, reaffirms Waisman proposition itself, on the type as a cultural element of the story, turning culture in a possible interaction between type and morphology with the landscape.

Finally, the landscape designed and narrated by the Jesuits, specifically in Brazilian lands, it was defined from an urban architectural typology with own meanings about their functions,

integral part of shaping the urban morphology of most Brazilian cities originating on the coast during the sixteenth century.

## References

- Argan, Giulio Carlo (1999) *Clássico anti-clássico: o Renascimento de Brunelleschi a Bruegel* (Companhia das Letras, São Paulo).
- Arquivo Histórico Municipal de São Paulo (2014) (at: [www.prefeitura.sp.gov.br/cidade/secretarias/cultura/arquivo\\_historico/](http://www.prefeitura.sp.gov.br/cidade/secretarias/cultura/arquivo_historico/)) accessed 24 April 2014.
- Barthes, Roland et al (1976) *Análise estrutural da narrativa. Pesquisas semiológicas* (Editora Vozes Ltda, Petrópolis, Rio de Janeiro).
- Brandão, Carlos Antônio Leite (1999) *A formação do homem moderno vista através da arquitetura* (Ed. UFMG, Belo Horizonte).
- Carvalho, José Antônio (1982) *O colégio e as residências dos jesuítas no Espírito Santo* (Expressão e Cultura, Rio de Janeiro).
- Capitel, Anton (2005) *La arquitectura del pátio* (Editorial Gustavo Gili, Barcelona).
- Costa, Lúcio (1941) 'A arquitetura dos jesuítas no Brasil', *Revista do Serviço do Patrimônio Histórico e Artístico Nacional. Serviço do Patrimônio Histórico e Artístico Nacional/Ministério da Educação e Saúde*.
- Dias, Fabiano; Campos, Martha Machado (2013) 'Palácio Anchieta (Vitória-ES-BR): questões tipomorfológicas e de paisagem', *Anais do I Congresso Internacional de História da Construção Luso-brasileira, Vitória*, Universidade Federal do Espírito Santo.
- Freyre, Gilberto (1999) *Casa-grande & senzala: formação da família brasileira sob o regime da economia patriarcal* (Record, Rio de Janeiro).
- Fustel De Coulanges, Numa (2004) *A cidade antiga* (Ediouro, Rio de Janeiro).
- Gonçalves, Nuno da Silva (2014) *Baltasar Teles. Cronista da Companhia de Jesus* (<http://ler.letra.up.pt/uploads/ficheiros/5270.pdf>) accessed 16 January 2014.
- Lamas, José M. Ressano Garcia (1992) *Morfologia Urbana e Desenho da Cidade* (Fundação Calouste Gulbenkian/Junta Nacional de Investigação Científica e Tecnológica, Lisboa).
- Leite, Maria Angela Faggin P. (1991) 'A paisagem, a natureza e a natureza das atitudes do homem', *Revista Paisagem e Ambiente*, 45-66.
- Loc.alize.us (2014) (<http://loc.alize.us/#/flickr:540557276>) accessed 24 September 2012.
- Nova Almeida (2013) *Nova Almeida blog* (<http://novaalmeida.blogspot>) accessed 20 June 2013.
- Oliveira, Beatriz dos Santos de (1988) *Espaço e Estratégia: considerações sobre a arquitetura dos jesuítas no Brasil* (Prefeitura Municipal, Uberlândia).
- Oliveira, Mauro Mendonça de. 'A Construção da antiga engenharia militar para a engenharia civil e a arquitetura', in Ribeiro, Nelson Pôrto (2013) *Subsídios para uma história da construção luso-brasileira* (Pod Editora, Rio de Janeiro).
- Oliveira, Mauro Mendonça de (1999) 'A engenharia militar de batina', *Revista do Exército Brasileiro: Defesa Nacional* 787.
- Patetta, Luciano (2003) *A arquitetura da Companhia de Jesus entre o maneirismo e barroco* (2003). *Barroco: Actas do II Congresso Internacional. Porto, Universidade do Porto. Faculdade de Letras. Departamento de Ciências e Técnicas do Patrimônio* ([www.ler.letras.up.pt/uploads/ficheiros/7549.pdf](http://www.ler.letras.up.pt/uploads/ficheiros/7549.pdf)) accessed 27 April 2012.
- Pereira, Renata Baeso (2012) *Tipologia arquitetônica e morfologia urbana* (<http://www.vitruvius.com.br/revistas/read/arquitextos/13.146/4421>) accessed 07 August 2012.
- Pessotti, Luciene; Ribeiro, Nelson Pôrto (2011) *A construção da cidade portuguesa na América* (PoD, Rio de Janeiro).
- Ribeiro, Darcy (2006) *O povo brasileiro: a formação e o sentido do Brasil* (Companhia das Letras, São Paulo).
- Santos, Paulo (1966) 'Contribuição ao estudo da arquitectura da Companhia de Jesus em Portugal e no Brasil'. *V Colóquio Internacional de Estudos Luso-Brasileiros*, Coimbra.
- Waisman, Marina (2013) *O interior da história: historiografia arquitetônica para uso de latino-americanos* (Perspectiva, São Paulo).