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## Measures and Model of the Churches of São Miguel (Azores)

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**Abstract.** The religious spaces are carriers of great symbolic importance, standing out in the urban fabric not only for their location, but also for their scale in relation to the surrounding buildings. We show the relevance of the religious space in the São Miguel island (Azores) urban fabric, where the church presents itself as an element of great importance. It is the generator of the urban fabric, and it is usually strategically located as a landmark of the civic centre of the localities. This study presents an analysis of the main façades of the parish churches of the island of S. Miguel built during the eighteenth and nineteenth centuries. It highlights the existence of a typology of façade, which is a consequence of the materials and building systems existing there at the time. This demonstration continues the studies carried out by Sousa (1986) with the concept of façade “micalense baroque ornamentation” and Caldas (2012) with the concept of “micalense baroque façade” and “micalense type façade”. Methodologically, the investigation was carried out through the analysis of the elements that make up the façades of the parish churches, the study of old and current photography, and drawings made in CAD; and the systematization of façades by grouping them into categories and establishing a typology between the various churches of the eighteenth and nineteenth centuries.

### 1. Introduction

The study addressed in this article presents the analysis of the main façades of parish churches on the island of S. Miguel, Azores, built during the 18th and 19th century. The similarities found on the façades indicate the existence of a facade typology. The proof of the existence of a common model arises from the similarities in the decorative elements and common patterns which comprise the facades, deriving from the materials and construction systems.

This study carried out an analysis of the common patterns and ornamental elements present on the facades of the churches on the island, mapping and characterizing the elements that compose them and grouping them into categories to establish a typology.

Upon researching the art under study, we realized that information was lacking in the various sources available for consultation. Not only were scientific studies on our topic difficult to find but there was also a lack of technical drawings for the churches under study.

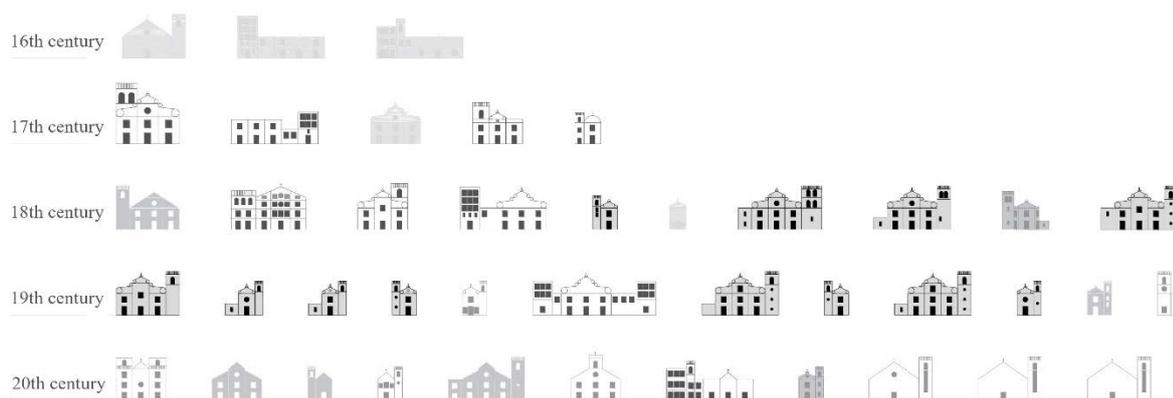
Despite the number of authors, from various eras, who wrote on the topic of religious architecture in São Miguel, the focus was predominantly on the historical aspects and the context of the buildings.



With the exception of Caldas [1 and 2], these written registers rarely analyse or comment on the replication of elements on the façade of these churches.

These authors did, however, present certain theories which supported this study. Namely: i) the existence of a particular way of life and culture of a people, from the lower strata of society, as referred by Ataíde [3], ii) the idea of a “type of façade from São Miguel” presented in a short essay by Caldas [1], iii) the study and analysis of drawings to interpret the façades, through the work of Quintão [4] and iv) the historical framework of religious architecture in Portugal according to the analysis completed by Kubler [5].

This study is based on a comparative analysis of eighty-three parish churches, out of a total of three hundred and seventy-six religious buildings which were built throughout the history of the island. In order to assess the method, we proceeded to study the façades and drawings/plans of the selected churches, in order to conclude if there was, in fact, a direct relationship between these two elements and how they developed in parallel over the centuries. The method of analysing and interpreting the forms of the church façade and their metric survey was based on recent and older photographic records and a comparative analysis based and organized on tables and overall schematic outlines organised into vector drawings (graphic representations made in CAD) (Figure 1).



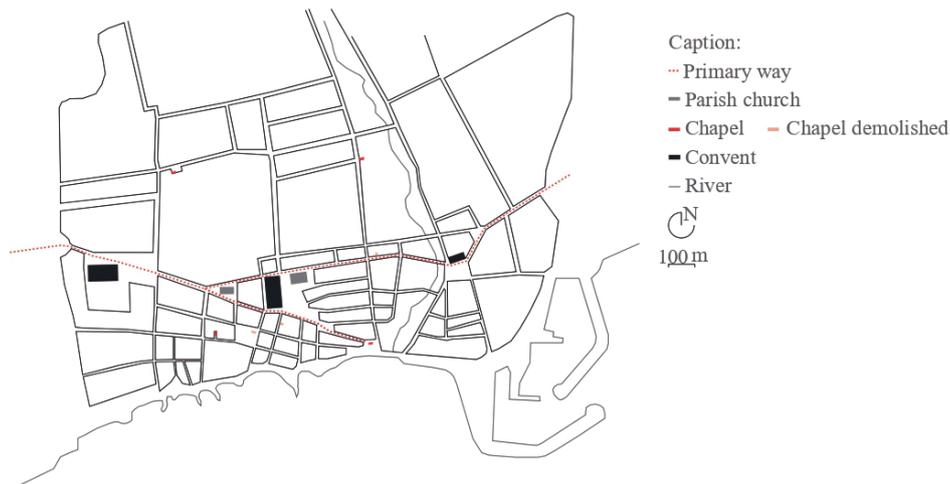
**Figure 1.** Extract from a comparative table: Timeline of the church facades from the island of São Miguel [6]

## 2. Religious Space

Focusing the study on the island, more specifically on S. Miguel, it was possible to perceive that religious spaces acquire greater grandeur and symbology in the urban grid, not only due to their prominent location, but also due to the greatness of their buildings compared to other buildings that make up the urban grid on the island.

Upon observing the development of the urban fabric, it was possible to verify that the urban grid was structured and based around religious spaces, which could either condition or foster the development of urban patterns. This explains why in certain cases, small villages and townships emerged around a hermitage. In other instances, the construction of larger-scale religious buildings in the interior of a city generated important civic centres, allowing the growth of the urban fabric. The squares, gardens or other open spaces surrounding or linked to churches and convents were transformed into main urban squares as time passed, and important structuring elements of urban spaces [7 and 8].

An example of this structuring element is the urban core of Vila Franca do Campo, the first town and the main centre of the island until 1522. During the initial phase of settlement and growth, the churchyard served as a town square from where the system of streets radiated to the beach and port. Location was important as it bestowed divine protection, as referenced by Father Gaspar in the sixteenth century before the great natural disaster. He stated that this village was well protected from danger and divine punishment, due to the presence of religious buildings, both to the north and south as well as east west [8] (Figure 2).



**Figure 2.** Urban Grid of Vila Franca do Campo (to date) [6]

### 3. Theoretical framework

It is important to mention that from the analysed literature for this study, five elements were extracted, which in our view differentiate the churches in São Miguel from others: i) ethnography; ii) the architect, iii) the façade; iv) the drawings; and v) the material. The latter directly conditioning the façade and the drawings.

The ethnography, determined by the fact it is an island, seismic activity and the Franciscans all influenced the image of the villages mainly due to the isolation of the island leading to the "crystallization" of certain devotions brought from mainland Portugal [7 and 9]. With regard to architects, master masons and masons of ancient religious buildings on the island of São Miguel, only one document listing them exists. It was written by Ataíde, and there are no other documents to support the accuracy of this list and in no way does it correlate to a list of portuguese architects prepared by Viberto [3, vol.II and 10]. Moreover, many names are unknown, which makes it difficult to investigate, as we are unable to justify the connection between churches through their authors (architects). The original technical drawings of the churches (blueprints, elevations) are often non-existent. Although research has been carried out in several archives in Portugal, no drawings made by these architects were found.

One could conclude that these buildings were not designed by architects, but by local builders adapting a composition seen elsewhere in other religious buildings [1]. Thus, it can be inferred that these churches are popular constructions made by the population for the population. In summary, due to the lack of technicians and construction materials on the island and knowing that these churches are vernacular constructions, in all likelihood they were all built based on the same design, drawn by an architect living on the island in the 18th century.

The construction material, basalt stone, found on the island is characterized by its colour. When placed against the white walls of the facades, the dark colour of the stone is enhanced, increasing its

contrast of light-shadow, resulting in a very striking image which is easily memorised. It was not worked in the same manner as other stone from the continent (lioz stone) due to its porosity and hardness [3].

The façade, which is composed of three independent volumes, the body, the tower and the baptistery [1], perceived as one independent set in the way they are laid out, reflects the floor plan. Its structure is dependent on the interior, as the elements that make up the church correspond to the architectural elements that structure the floor plan. Consequently, the pillars or columns of the drawing correspond to the pilasters on the façade, the naves to the bays.

The plan for larger-scale churches is composed of three naves, the central nave being wider and taller than the other two and for smaller-scale churches, there is only one nave, characterized as an archaic construction for its time of construction (19th century). XVIII and XIX) [1].

This analysis justifies the methodology used to support the existence of a "model façade", due to the similarity between facades. This expresses a notion of image (visual ordering) that serves as a reference, exclusive to the territory of the island of São Miguel.

#### **4. Model Façade**

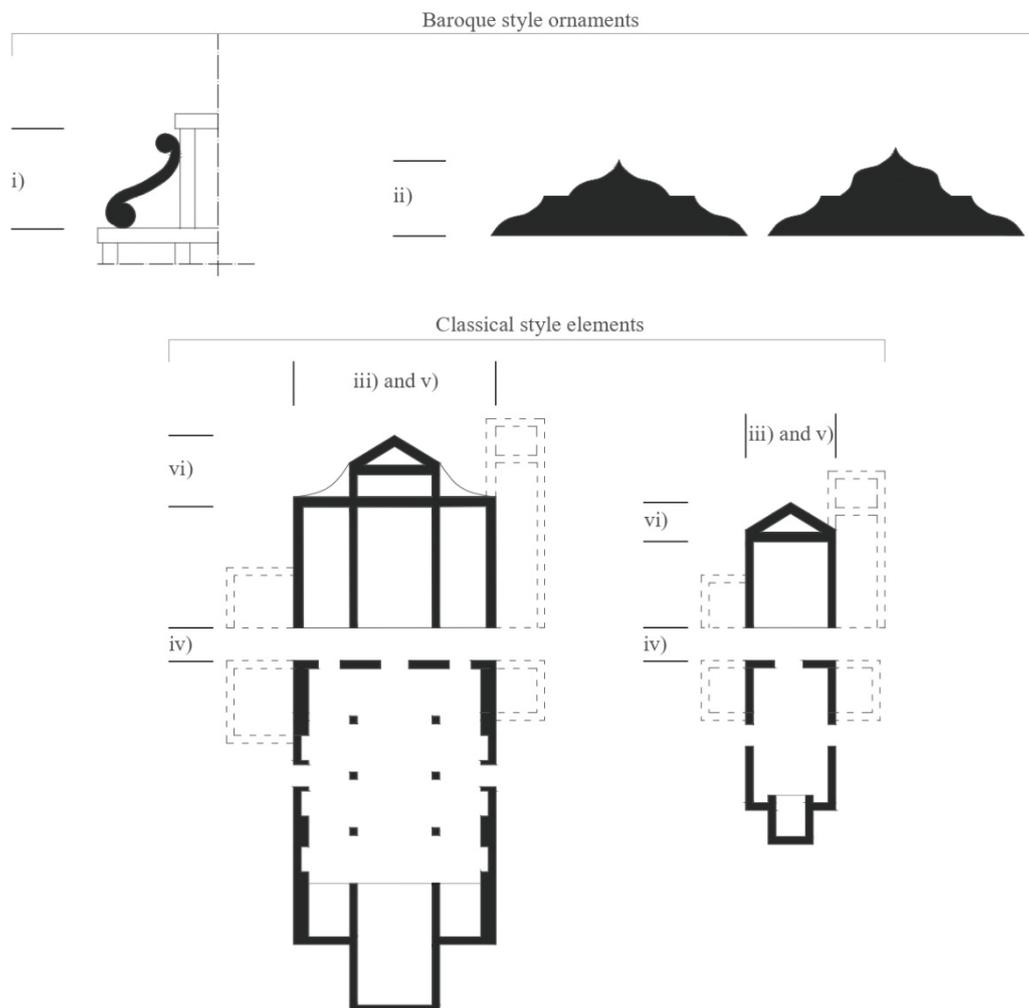
Without an exact designation but based on defined concepts, such as "baroque micalense (from the island of São Miguel) façade" [1], "a type of micalense façade" [4] and "façade with baroque micalense ornamental elements" [11], the concept of "model façade" emerged. It is applicable to any façade with baroque micalense style ornaments, and classical characteristics [4] portraying a similar image originating from the material (basaltic stone on a white background) and the constructive system (adapted to the material originating from the island) which were used.

This chosen designation "façade (model)" is based on Rossi's classification [12] where he defines and argues that the designation of "model" refers to a precise (architectural) object and that it can be repeated and copied as it is, contrary to "type" which represents the image of an object, in other words, the concrete elaboration of a model that cannot be copied.

Thus, the churches with a model façade have: baroque style ornaments defined by i) a pediment made up of volutes; ii) a counter-curved cornice and iii) a flat façade, and a compositional mix of classical elements, determined by iv) the façade that reflects the floor plan; v) the trilithon structure (bay, stratum and entablature); vi) the elements that form the structure with the same expression and the double pediment (larger pediment surmounted by the smaller pediment) (Figure 3).

#### **5. Results and discussions**

From the studies carried out by Canto in 1897 [13], Dias in 1950 [14] and Costa in 1956 [15], it was possible to complete an overall analysis of all the religious buildings on the island and cross reference these to the central body of churches. We were able to conclude that the churches with a model façade are marked between 1728 and 1882, a period in which a large number of churches with identical compositional characteristics (forty-one parish churches with model façade) emerge. These churches follow the model of the main churches in Ribeira Grande (1728) and in Ponta Delgada (1733), designated by Ataíde [3] and Caldas [1] as mother churches as they served as an example and model for all the other churches that were built on the island.



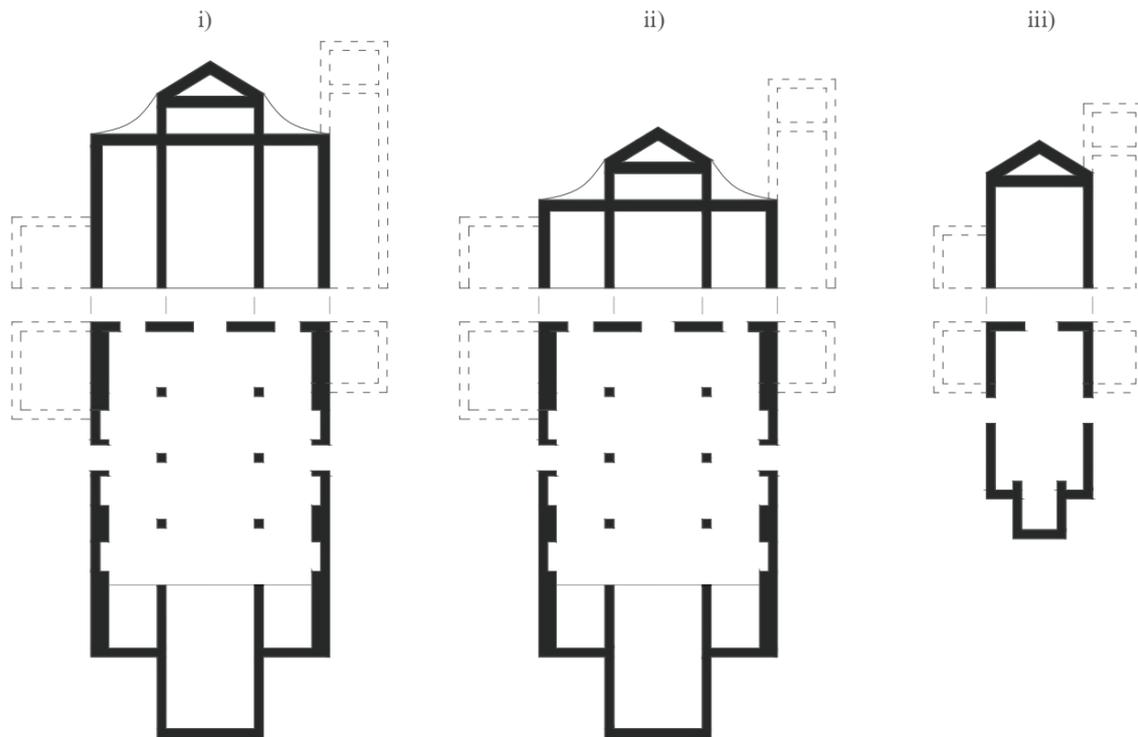
**Figure 3.** Criteria for the model façade (Baroque style ornaments and classical style elements) [6]

Thus, the model façade is one which always presents the following characteristics: i) based on the arrangement of three bays, three levels and two entablatures, for churches with three naves; ii) the arrangement of three bays, two levels and two entablatures, for churches with three naves; and iii) the combination of a bay, one level and an entablature, for churches with one nave (Figure 4).

In addition to the visual analysis and the direct observation of the various facades, a quantitative assessment was used through a metric survey of the width of the façade. Regarding the dimension of the façade, this varied between seven to eighteen meters or twenty-one meters in width. For churches with three naves, these are generally fourteen or fifteen meters in width and churches with only one nave generally have facades which are eight meters wide. In relation to the size of the tower, this varies between two to five meters or even six meters. The most common being three to four meters in both examples of churches. The dimension of the front part of the baptistery, on both scales, is usually between two to five meters or even seven meters. The most common is four meters in the two examples of churches.

This profile presented in the various model façade churches is present in small urban and rural centres but not in large urban centres, due to the presence of convent buildings and the involvement with other realities. These are the cases of Ponta Delgada and Vila Franca do Campo. It is thus

possible to conclude, as previously mentioned that these are buildings made by the people and for the people, materializing faith and popular culture that is well ingrained in these peripheral territories.



**Figure 4.** Typology of churches in São Miguel with a model facade [6]

## 6. Conclusions

The concept of model façade, which is applicable to any Baroque style facade in São Miguel, is made up of classical characteristics derived from the set of concepts already defined by other researchers [1, 2 and 5 and 11] and conveys the notion of a unifying image, which is also a consequence of its construction system. The typology of a church with a model façade is one which is not commonly found in a large urban centre, such as in the city of Ponta Delgada, where we may find convent churches.

The churches built on the island of São Miguel reflecting a faith has always been very pronounced in the people and in their beliefs and all aspects of life, apparent in the capacity and will build churches and chapels throughout the territory. They are characterised by the similarity of the various façades, and the period in which they were built, between 1728 and 1882.

It is important to emphasize that the building materials of the facades aid in materializing an image to reinforce the splendour of the church, making it unforgettable. The floor plan reflects the facade, whether in churches of a greater or lesser scale.

Although there is a common image of a church facade in São Miguel which is common to all the existing churches on the island, due to the material used, we find different characteristics, which lead us to apply different designations. In this way, we verified the existence of churches with façades conveying an image of “family”, as they only present one of the classifying concepts, either Baroque style ornaments, or classical patterns and a “non-standard” image. Both classifying concepts were not present.

After analysing the rules that make up the façades of the S. Miguel churches, design trends are evident. Most of the churches have a baptistery located on the right, with only one window, which is normally aligned and connected to the facade of the body of the church either by alignment or decoration of the frame. The towers, which are primarily located on the left, present two different stations. The tower is either made up of three windows that are linked to the body of the façade by alignment or decorative features on the frame or is made up of three windows which are totally disconnected from the body of the façade.

As far as the dimensions of these structures, the most apparent are the repeated dimensions of the tower found in churches with three bays and one bay. The central body of the façade measures, in the case of churches with three sections, fourteen or fifteen meters in width and in churches with only one bay, eight meters in width. The body of the tower is three or four meters in width in both examples of churches (churches with three and one bay) and the body of the baptistery in both examples of churches is four meters wide.

As initially proposed, with this research it was possible to analyse and summarise a typology among the various parish churches on the island of São Miguel and simultaneously map and establish a model facade for São Miguel, according to the principles of composition present in the analysed facades.

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