



Architecture of Contemporary Religious Spaces

Morphological Analysis

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EXTENDED ABSTRACT

Thesis to obtain the Master of Science Degree in

Architecture

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CHAPTER 1 | INTRODUCTION

THEME AND OBJETIVE OF THE STUDY

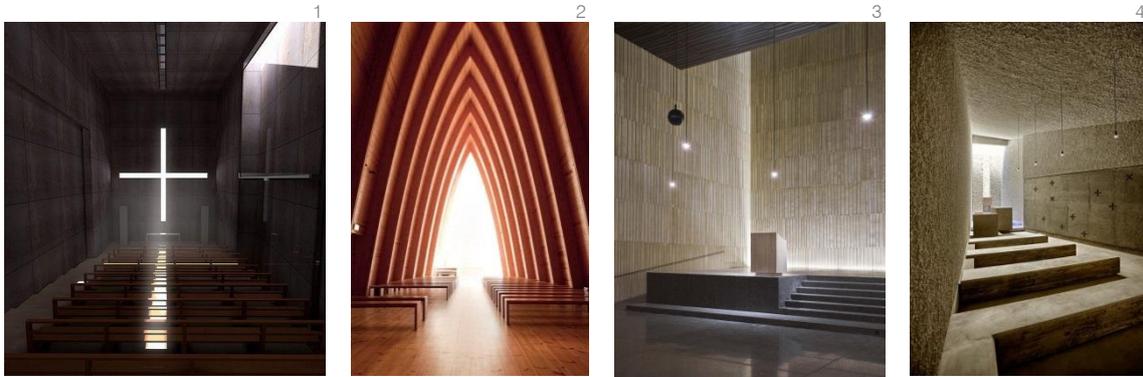


Fig. 1 | (1) Church of the Light, Tadao Ando, Osaka, 1989; (2) St. Henry's Ecumenical Art Chapel, Turku, Sanaksenaho Architects, 2004-05; (3) San Jorge Church, Navarra, Tabuenca&Leache, 2008; (4) San Juan Bautista Chapel, Tenerife, Alejandro Beutell, 2013

The subject of this thesis is the contemporary catholic religious architecture.

The choice of subject was first due to the fascination with the architecture power to create places with identity and environments / atmospheres able to awake the senses and emotions, triggering experiences.

Secondly, due to the conviction that the spiritual and metaphysical experience can be enhanced by the liturgical space experience. If the liturgical space aims to provide a religious experience, it is the architecture responsibility to answer that demand, establishing itself as a medium - *rising space* - to reach the divine.

Religious architecture has the ability to express the 'unspeakable' and the transcendent. Therefore, it is a great challenge for the architect to design spaces that can provide the desired religious experience.

This thesis aims to explore the rules of compositional nature that respond to the liturgical principles arising from Liturgical Movement (first half of the 20th century) and the II Vatican Concilio (1961-1965), which contribute to trigger the religious experience.

STUDY ORGANIZATION

This work can be divided into two main moments, corresponding to four chapters.

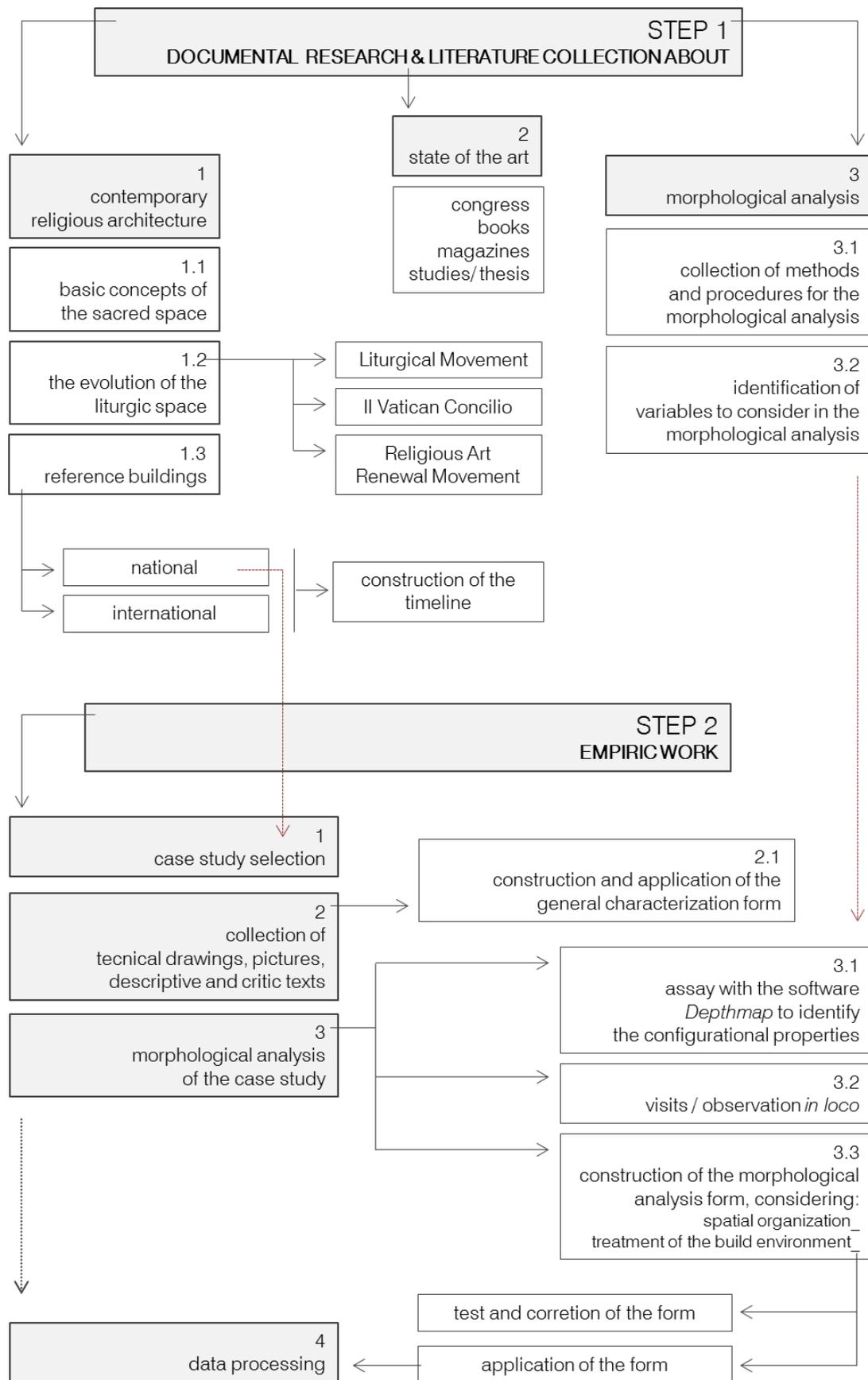
In the first moment, corresponding to chapters 2 and 3, it addresses the cultural, ideological and artistic context of the development of modern and contemporary religious architecture, nationally and internationally.

The second moment - chapter 4 - corresponds to the empirical work. In this chapter, there were analyzed eight works of contemporary religious architecture, built at the end of the 20th century and beginning of the 21st century, in Portugal and designed by portuguese architects:

- 01 | Santa Maria Church, Marco de Canaveses, Álvaro Siza Vieira, 1990-96
- 02 | Santo António Church, Portalegre, J. L. Carrilho da Graça, 1993-2009
- 03 | Chapel of the Tree Life, Braga, Cerejeira Fontes Arquitetos, 1995-2000
- 04 | Chapel of CREU-IL, Porto, Nuno Valentim + Frederico Eça, 2002-03
- 05 | S. Domingos Convent Church, Lisboa, J. F. Gonçalves + J. P. Providência, 2004-05
- 06 | Santa Ana Chapel, Sousanil, e|348arquitetura , 2009 -10
- 07 | Nossa Senhora da Boa Nova Church, Estoril, Roseta Vaz Monteiro Arquitetos, 2009-10
- 08 | Nossa Senhora das Necessidades Church, Chãs, Bica Arquitetos 2009-12

The last chapter - chapter 5 - corresponds to the conclusion and the critical findings of the work done.

METHODOLOGY



CHAPTER 2 | THE MODERN CHURCH: THE PROGRAM AND THE LITURGICAL SPACE

This chapter presents the changes in the program and liturgical space of churches, developed during the 20th century, framing them in the ideological, cultural and artistic context that influenced their foundation.

The new guidelines developed with the Liturgical Movement and confirmed by the II Vatican Concilio led to concrete and practical changes in places of worship, posing new challenges to religious architecture. The worship space should reflect the new spirit of welcoming and service to the communities and the will to approach the liturgical celebration.

This chapter is organized into five parts. In the first part, introducing the subject, some basic concepts of religious architecture are presented. The second part refers to the values and consequent changes in the design of the liturgical space that came with the Liturgical Movement and the II Vatican Concilio. It stands out, as a major change in the design of the liturgical space, the new position of the altar, which moves from near the wall to the center of the presbytery and closer to the community.

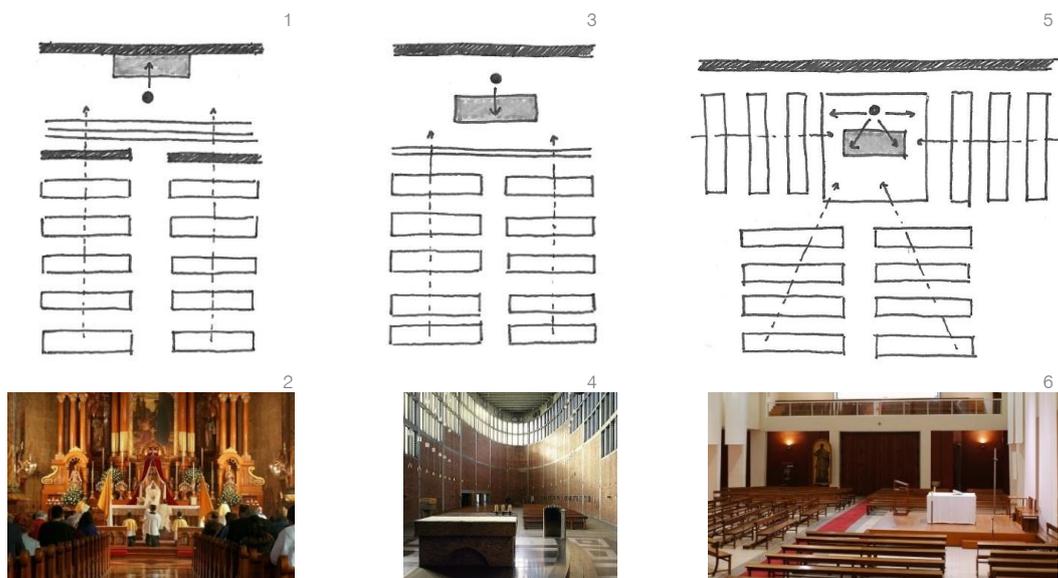


Fig. 2| Diferentes configurações do espaço litúrgico:

(1) Plan study – the altar as a counter, axial-processional configuration of the assembly, celebration of the Tridentine Mass; (2) S. St. John Cantius Church, Chicago (USA), Adolphus Druiding, 1893;

(3) Plan study – the altar as a table, axial-processional configuration of the assembly, celebration of Paulo VI's Mass; (4) St. Theresa Church, Linz (Austria), Rudolf Schwarz, 1961

(5) Plan study - the altar as a table, centralized configuration of the assembly, celebration of Paulo VI's Mass; (6) S. João de Brito School Church, Lisbon, 2001-03 (remodelation project, presented on the image, made by the architect Bernardo Miranda)

The third section presents the key concepts that define the *church-house* model, as a way of implementing the spirit of the post-conciliar Church: centrality of the altar, hospitality, simplicity and flexibility.

It is also addressed, in the fourth part, the influence of modern art and architecture in this changing process, taking into account that the Liturgical Movement finds in the Modern Movement principles - functionalism, clearance, authenticity, rationalism, clarity - a strong match.

Finally, we present five works of reference in modern and post-conciliar religious architecture, which materialize ideas of the *church-house* model:



Fig. 3 | (1) St Laurentis Church, Munich (Germany), Emil Steffann, 1955-70; (2) Santa Ana Church, Madrid (Spain), Miguel Fisac, 1955-60; (3) Church of St. Benedict's Abbey, Vaals (Netherlands), Dom Hans Van der Laan, 1956-67; (4) St. Peter Church, Klippan (Sweden), Sigurd Lewerent, 1963-66; (5) St. Paul Church, Dielsdorf (Switzerland), Justus Dahinden, 1964

CHAPTER 3 | THE MODERN CHURCH IN PORTUGAL

Along with what was happening in Europe, in Portugal was also expressed the willingness to rethink the religious architecture and present new ideas for a church coherent with its time.

The MRAR - Movimento de Renovação de Arte Religiosa (Religious Art Renewal Movement) encouraged and implemented many ideas of the Liturgical Movement, which started in Portugal in 1926, with the 1st Portuguese Liturgical Congress, in Vila Real.

The MRAR was composed by a group of architects, artists and historians who, in the spirit of the Liturgical Movement, worked with the main objective of providing religious buildings in Portugal with higher artistic quality and greater dignity, defending the execution of religious works of art (architecture, painting, fine arts, sculpture) by competent artists, opposing to the traditionalists and revivalists models.

This study and redefinition of the church space also led to a renewal of the Church and its role in Portugal (assumed politically as the Catholic opposition to the Estado Novo), and anticipation of the ideas that the II Vatican Concilio was to consecrate.

This chapter describes the process of change and modernization of religious architecture in Portugal, carried out by the Religious Art Renewal Movement, focusing on its innovative ideas and its architectural heritage. Thus, we tried to understand the basis for contemporary religious architecture in Portugal.

The chapter is divided into three parts. In the first part, it is presented the Religious Art Renewal Movement, its objectives, working method, intervention and the development process. The second part addresses the core values and principles advocated by the MRAR for religious architecture - integration, functionalism, bareness. Finally, we present five churches of reference designed in the context of MRAR.



Fig. 4 | (1) Nossa Senhora de Fátima Chapel, Águas, Nuno Teotónio Pereira, 1949-57; (2) Santo António Church, Moscavide, João de Almeida & A. Freitas Leal, 1953-56; (3) Church of Sagrado Coração de Jesus, Lisboa, Nuno Portas & Nuno Teotónio Pereira, 1962-70; (4) Nossa Senhora de Fátima Church, Póvoa do Valado, Luiz Cunha, 1964-68; (5) Church of Sagrada Família, Paço de Arcos, João de Almeida, 1964-69

CHAPTER 4 | THE CONTEMPORARY CHURCH – CASE STUDY ANALYSIS

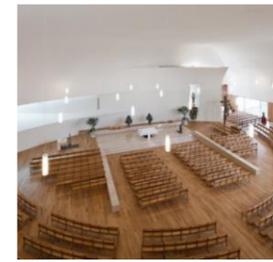
This chapter is divided into three stages. First, we characterize and analyze each case study, using two forms: the general characterization form and the morphological analysis form. After that, it is presented a comparative analysis. And finally, it is made an overall assessment of the analysis, and from similarities found among the various cases architectural strategies that characterize the contemporary religious space are identified.

The contemporary religious space is characterized, as ‘casing’ of the religious experience, from two points of view:

- The shape of the ‘casing’ – considering its dimensions, the design of the plan, morphological elements, the space-functional organization, the configurational properties, visual relationships and spatial control (space syntax¹)
- The treatment of the ‘casing’ – considering the entry and control of natural light, permeability relations, ornamentation, materials and colors

The following table presents a summary of the analysis and allows comparisons between the case study.

¹ *Space Syntax* is a theory and spatial analysis methodology applicable to urban level or to buildings, which seeks to relate the configuration and spatial morphology to social, economic and environmental phenomena. It consists on a set of techniques that allow us to represent and interpret the built environment in order to understand and quantify the relationship between their physical and social dimensions.



01 | SANTA MARIA CHURCH

02 | STº. ANTÓNIO CHURCH

03 | CHAPEL OF THE TREE LIFE

04 | CHAPEL OF CREU

05 | S.DOMINGOS
CONVENT CHURCH

06 | SANTA ANA CHAPEL

07 | BOA NOVA CHURCH

08 | NOSSA SENHORADAS
NECESSIDADES CHURCH

AREA

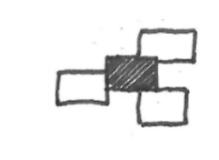
○ = up to 200 m2



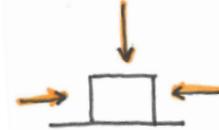
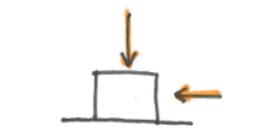
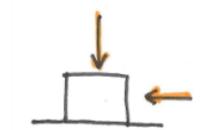
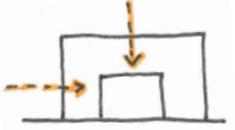
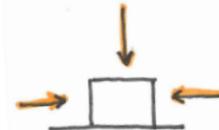
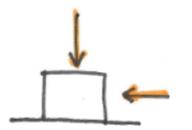
FUNCTIONS



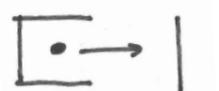
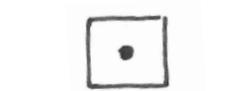
IMPLANTATION



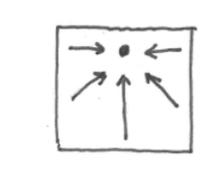
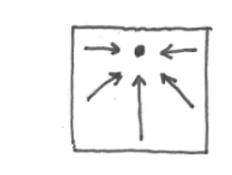
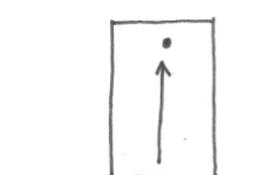
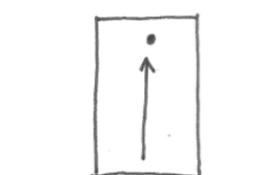
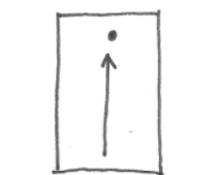
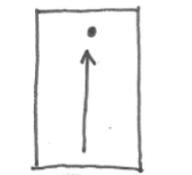
LIGHT



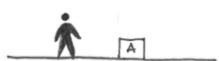
INTERIOR-EXTERIOR
RELATION



ASSEMBLY'S
CONFIGURATION



RELATION
PRESBYTERY-ASSEMBLY



COLOURS



Fig. 5 | Comparative table

-  church
-  social center
rooms for social/cultural activities
-  priest residence
-  seminary | convent
-  mortuary chapel
-  library
-  school
-  auditorium

-  disperse cluster construction
-  compact cluster construction
-  isolated construction
-  isolated construction inside a building
-  implantation on higher plan
accessed by stairs
-  implantation on leveled plan
-  implantation on lower plan
accessed by stairs

-  from top
-  from one side
-  from both sides
-  closed
-  opened to
a limited exterior space
-  opened to
a no-limits exterior space

-  one-way/ axial-processional
configuration
-  multi-way/ centralized
configuration
-  elevated presbytery
altar on the upper plan
-  elevated presbytery
altar on the lower plan
-  leveled presbytery

The four architectural strategies found in the study that define the contemporary catholic religious space are:

- Brightness: combination of homogeneous and abundant lighting through indirect input devices with the white coating of surfaces
- Bareness/*visual silence*: sober and uniform treatment of surfaces that makes the altar the most prominent element
- Permeability: openness to the outside for contemplation of nature
- Enwrapping: preference for simple plans and large/fluid spaces that allow its full visual control, use of curved shapes, comfortable and sheltering space offer

CHAPTER 5 | CONCLUSION

The program of a church is a great demand for the architect, because it shelters a complex experience. The poetic/aesthetic condition of the building takes a particularly intense and decisive role in its responsiveness to its purpose - the religious practice.

Contemporary religious architecture, although in a different way, continues to provide worthy spaces able to gather a community that wants to celebrate and pray. Keeping the spirit of the Liturgical Movement, it bases the design of the catholic worship space on its program - the liturgical celebration with the faithful active participation.

As in any work of architecture, the poetic/aesthetic condition of contemporary religious spaces is subjective and depends on the expectations and the sensitivity of its users.

As a church or chapel mission is to spiritually serve a particular community, becomes a relevant step to know the average age of the group of people, their education and culture, tradition and habits of their faith life. The great challenge of contemporary religious architecture is to conciliate the architect's intentions with the expectations and sensitivity of the community, so that the project is well-accepted and the spatial experience conceived by the architect is accomplished, making the religious experience more intense.

Despite the controversial issues, the current concept of sacred space breaks with traditions and assumptions in a relevant way. Contemporary religious architecture reveals a greater assimilation of the principles arising from the Liturgical Movement and a greater approach to the *church-house* model, integrated in today's culture and expresses the Church openness not only at an artistic level, but also cultural and institutional.