

RELATIONSHIP OF PROPORTIONS, FLOORPLAN PATTERNS, TYPOLOGY, AND SYMMETRY IN RELIGIOUS ARCHITECTURE WITH PARTICULAR FOCUS ON THE ROMAN CATHOLIC CHURCH ARCHITECTURE IN INTERWAR HUNGARY

ESZTER HAJÓS-BAKU

Name: Eszter Hajós-Baku (b. Budapest, 1984)

Profession: PhD researcher, Art historian

Fields of interest: sacral architecture, interwar period, historical plaster casts

Affiliation: Budapest University of Technology and Economics, Faculty of Architecture

E-mail: bakueszter@gmail.com

Major publications and/or exhibitions:

Hajós-Baku, E., Szűts, B. (2021) Drawings, ornaments, and historical plaster casts: The reform of drawing education in the Technical University of Budapest, *Symmetry: Culture And Science* 32: 3 pp. 431-449. , 19 p.

Hajós-Baku, E., (2018) Vox temporis vox dei: Catholic ecclesiastical art in Hungary between the two world wars examined via the Church's provisions and press releases. *Religion And Society In Central And Eastern Europe* 11: 1 pp. 21-37. , 17 p.

Baku, E., (2016) Theory and Practice: Protestant Church Architecture between the Two World Wars. *Architectura Hungariae* 15: 3 pp. 133-146. , 14 p.

Baku, E. (2013) Tradition and Liturgy: Centralising Tendencies of Lutheran Church Architecture in Hungary during the Interwar Period. *Periodica Polytechnica Architecture* 44 : 1 pp. 1-8. , 8 p. (2013)

Baku, E., Csíky, B.(2012) Hagymány és újítás: katolikus egyházművészet a két világháború közötti Magyarországon In: Mózessy, Gergely (szerk.) Prohászka-tanulmányok, 2009–2012: A Székesfehérvári Egyházmegye Prohászka-konferenciáinak előadásai. Székesfehérvár, Magyarország : Székesfehérvári Püspöki és Székeskáptalani Levéltár, pp. 286-308. , 23 p.

Baku, E., Urbán, E., Vukoszávlyev, Z., (2017) Protestant space-continuity: Architectural–Structural–Liturgical Coherences of the Hungarian Protestant Church Architecture in the 20th Century. *Actas del Congreso Internacional de Arquitectura Religiosa Contemporánea* 5 pp. 122-131., 10 p.

Abstract: *Symmetry, asymmetry, and proportions are often discussed terms in architecture since Vitruvius. The most prominent Renaissance masters of architecture and architecture theory drew on his reflections when contemplating architectural proportions and symmetry. The surge of Modernism in arts in the 20th century brought the question of proportion once again into the limelight. The one building type with some of the longest historical traditions is the church, whose architecture, due to the functional constraints and the often-rigid liturgical rules of the denominations, has been very slow to adapt to the changing times. Church architecture of the interwar period is remarkable in multiple ways, carrying the marks of bygone centuries but also an openness to innovation. In its architecture, the Roman Catholic Church of Hungary sought to maintain the delicate balance between the preservation of tradition and the expansion of modernist trends. In the pursuit to better understanding the co-existence of traditions and modernism in the interwar church architecture, the attitude towards symmetry arises as a potential new vantage point. In comparison to the usual practice of style-based examination, the analysis of patterns in both the layout of facades and floor plan arrangements with the help of a specific typology is pointing to new research directions.*

Keywords: Church Architecture, Typology, Symmetry, Interwar Period, Modern Architecture

INTRODUCTION

Recent decades have experienced an intensified research interest in the architecture of the interwar period, the subject nevertheless is still far from being fully exhausted. The focus of the present research is on Roman Catholic churches built during the interwar period in the middle of Europe, in Hungary. This particular period is rather important from the perspectives of both architecture and religious arts, since next to the ruling trends of the revivalist reinterpretation of historical styles it also marks the development of a demand for progressive, modern ecclesiastic arts, which prompted the inception of modernist church architecture. (Hajós-Baku, 2018, p. 6., more details on the topic in Pamer, 2001) While a larger share of church designs conceived in this period continued to draw on the architectural vocabulary of preceding eras, the vast majority foreshadowed or already exhibited, in their response to the transforming social and functional requirements of the modern age, the characteristics of the Modernist style. However, general consent on the tendency was not without controversies, as the Roman Catholic Church of Hungary sought to create and systematically maintain some sort of a delicate balance between the unconditional respect for traditions and the introduction of modernist trends to church buildings and religious artworks. (Baku-Csíky, 2012, p. 291) The question is, what was considered appropriate at the time and why, and what are the potential aspects that help understand what represented tradition in church buildings and what could be interpreted as acceptance towards modern (Figure 1).



Figure 1 Examples of the style-pluralism in the interwar period in Hungary (photos: Eszter Hajós-Baku)

ATTEMPT OF CREATING A TYPOLOGY TO SUPPLEMENT INTERWAR PERIOD CHURCH BUILDINGS' RESEARCH

The analysis of several hundreds of church buildings has raised several aspects, the synthesis of which resulted in a unified form of typology which could help the understanding of church building in the era, the evaluation, and the answering of the question above. Ferkai (1995) and Ferkai (2001) analysed the building process of Budapest between the WW's. This typology rests on three pillars: the question of the architectural style and the concept of space, the use of building materials, and finally, the liturgical functions and their spatial layout. Two out of the three directions are in close connection with the presence of symmetry / asymmetry.

The external and internal appearance of the buildings show strong relations, and reveal patterns, which employed either next to or in place of style-based examination, put the architecture of the era into new perspective. Looking from the direction of symmetry, this paper analyses first the facades, the position of the tower(s) and the layout of doors and windows, including the fenestration of the sanctuaries which exhibit a particular diversity in this period. This is followed by the spatial analysis of the buildings, together with the examination of their floor plan arrangement. In addition to the predominantly axial and axisymmetric church buildings, there are several that follow a central (Figure 2), often rotational symmetrical arrangement, and, in line with the experimental spirit of modernist church design, there are also examples for intentionally asymmetrical structures.

The advantage of the typology is that these types can be relatively easily assigned to the rich repertoire of styles. In reference to historical architecture one can necessarily deduce some simple principles in terms of the individual styles, floor plan layouts, facade design and the question of symmetry. Besides, some noteworthy conclusions can be drawn from modernist church buildings when analysed along the same lines, i.e., the relationship between architectural style, floor plan and facade layout and symmetry.

Under careful scrutiny, even church buildings considered the most progressive and modern eventually reveal the signs of the Church's unconditional respect for traditional heritage. While in many cases the design of these buildings seemingly seeks to distance itself in all respects from preceding historical architectural attitudes, symmetry in their floor plan arrangement remains a clear reference to traditional church architecture. It may therefore be a rational assumption that the use of symmetry in the floor plan and facade design is the last remaining connecting link to traditions to be broken in the modernist pathfinding process of religious architecture, although examples for venturing so far are relatively scarce in this period in Hungary. Subsequently, symmetry may seem to be regarded as the symbol of unconditional dedication to traditions, and as such, conform with the Church's standpoint.

CONTEXTS OF FLOOR PLANS, STYLES AND FACADES

The interwar decades witnessed the construction of more than 400 new Roman Catholic church buildings (contains both churches and chapels) in the twelve dioceses within the current borders of Hungary. The typology presented in this study was prepared based on the analysis of church buildings in four dioceses, covering one third of the area of the country. While the exhaustive analysis of all church buildings is yet to be completed, some major tendencies can already be observed from the study of the four dioceses. The typology investigates connections between the floor plan layout and the building style. It concluded that almost half of the examined church buildings follow a longitudinal aisleless layout, approx. 30% are three-aisled basilicas, 13% have a cruciform ground plan, and less than 7% follow some type of concentric or centralized spatial arrangement. Centrality in the architecture of Roman Catholic church buildings primarily derives from a specific designation, or function. Accordingly, in the interwar period, memorial buildings, churches in connection with mortuary rites and practices as well as votive church buildings were often erected on a centralized plan layout. But even in Catholic churches with a centralized plan layout, the liturgical furnishing and the use of the space largely followed those of the longitudinal churches, with the entrance and the chancel with the alter marking the two ends of a longitudinal axis. (Hajós-Baku, 2018, pp.53-54.)

Upon attempting to link said plan layouts to architectural styles one would learn that church buildings designed in Neo-Romanesque or Neo-Gothic styles tend to follow a three-aisled basilica layout, with or without transepts, and typically feature two towers on their front elevation, further reinforcing the strict symmetry applied throughout the exterior and interior. At the same time, Neo-Baroque churches show a greater variety in both their plan layout and facade structure, consciously balancing between symmetry and asymmetry. Most Neo-Baroque churches accommodate to the longitudinal basilica plan and come with a pair of towers on the front elevation, or a single tower, either along the longitudinal axis (further accentuating the axial layout), or placed in an eccentric, asymmetrical position. The latter however is not analogous to the asymmetrical placement of the tower commonly used in modernist Hungarian church architecture in the era. Churches designed in Neo-Baroque style include examples for centralized layout and rotational symmetrical plan arrangements as well. As pointed out previously, centralized floor plan layouts had historically been associated with memorial buildings. Continuing this tradition in the church architecture of this period and summoning the rich symbolism inherent in the geometric forms complied with Catholic Church's interpretation of traditionalism. Other than a few isolated examples, churches built in Neo-Renaissance or Neo-Classicist style are relatively scarce in this period.

Churches built in modernist style showcase the biggest freedom and variety in the configuration of their plan and elevations. (Figure 2) In addition to longitudinal single-nave interiors, a redefinition of the proportions of traditional basilica and hall church interior lead to the inception of corridor-like aisles, separated from the nave by reinforced concrete row of columns or piers. At any rate, this - still relatively restrained - system conformed to the Church's attitude towards traditionalism, as it reformed traditional spatial arrangements by altering the proportional relationship among the aisles and the nave. Despite the shift in the proportion of the aisles, the inner symmetry of the longitudinal spaces remained, and the facades, for the most part, resonate with interior spatial structure. The bell tower, the most characteristic feature of the exterior, shows a great variety in modernist churches. The most common configuration is a rectangular prism-shaped tower attached asymmetrically to the side of the church. 37% of all churches surveyed in this study followed this composition, including mostly but not limited to those designed in modernist style. 'Campanile' style towers (detached from the main body of the church or connecting only by an arcade) however, were exclusive to modernist churches.

Beyond the position and configuration of the tower, a novel asymmetrical layout for the interior - where the nave and the chancel are formed as a composition of a square and a semi-circular section - was also introduced in a group of modernist churches, (Figure 3) The most innovative example for this arrangement (and perhaps for the entire church architecture of the interwar period in Hungary) is Saint Stephen Church of Kurucdomb in Sopron (designed by Nándor Körmendy), where the conventional spatial configuration has been swapped: creating an auditorium-shaped nave connecting to a rectangular chancel. The expansion of the former Turkish mosque in Pécs with a semi-circular annex (also designed by Körmendy), likely served as the prototype project for this experimental and innovative use of the liturgical space. That scheme placed the altar on the borderline between the square base of the historic mosque and the new annex in a way that enables the space for the celebration of both Tridentine Rite and Novus Ordo Masses. (Figure 3) (Baku-Kovács, 2017, pp.440-441.) The layout may be considered a turning point in the Catholic Church's shifting attitude in the interpretation and commitment to traditions, where one of the last remnants, the aspiration to symmetry was replaced with a multi-axial centralized structure, an apparent symbol of communion, thus paving the way to a new type of religious architecture. (Vukoszávlyev, 2012, p. 364.) Regrettably, the opportunity for such ventures was cut short by World War 2, and among the hardships post-war religious architecture in general had to face, a continuity with pre-war modernity, aside from a few of its achievements, could never fully follow through.

The evaluation of the typology has shown how the Roman Catholic Church continued to promote traditional historical styles with symmetrical floor plans but on the other hand a handful of new

church buildings were built using new building materials in a progressive manner. These modern churches maintained their connection to traditional ecclesiastical architecture by using symmetry either in a longitudinal or central arrangement. At the very end of the interwar period, a few experimental spatial layouts evidence efforts towards the total liberation of floor plans of traditional constraints and also facades that celebrated asymmetry. The attempts by Nándor Körmeny at merging a rectangular space with a semi-circular annex as in Pécs and Sopron, or the longitudinal aisleless layouts with an expansion of a side choir resulted a communion-based thinking in modern Hungarian church architecture.

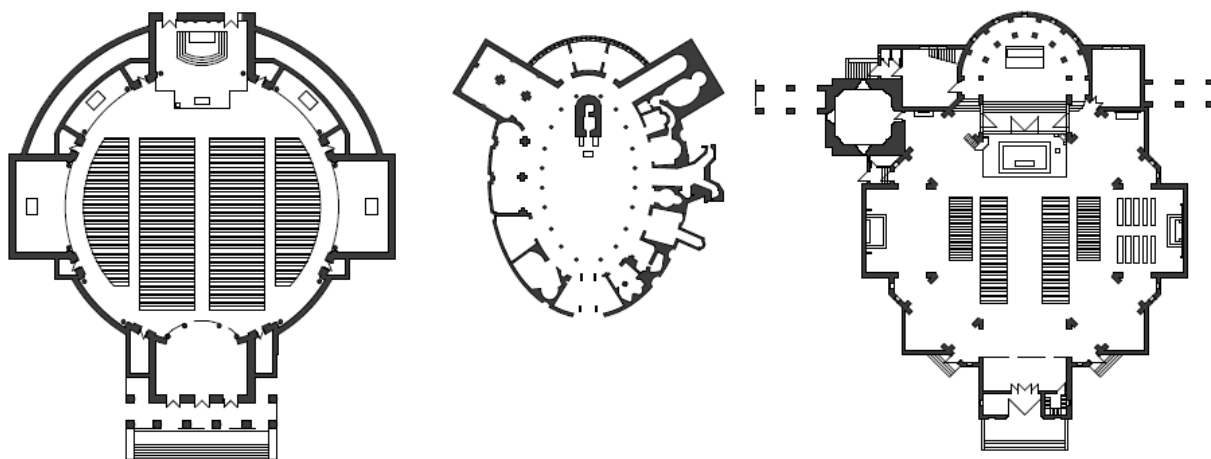


Figure 2 Churches with round, oval and octagon floor plan from Székesfehérvár, Budapest and Mohács

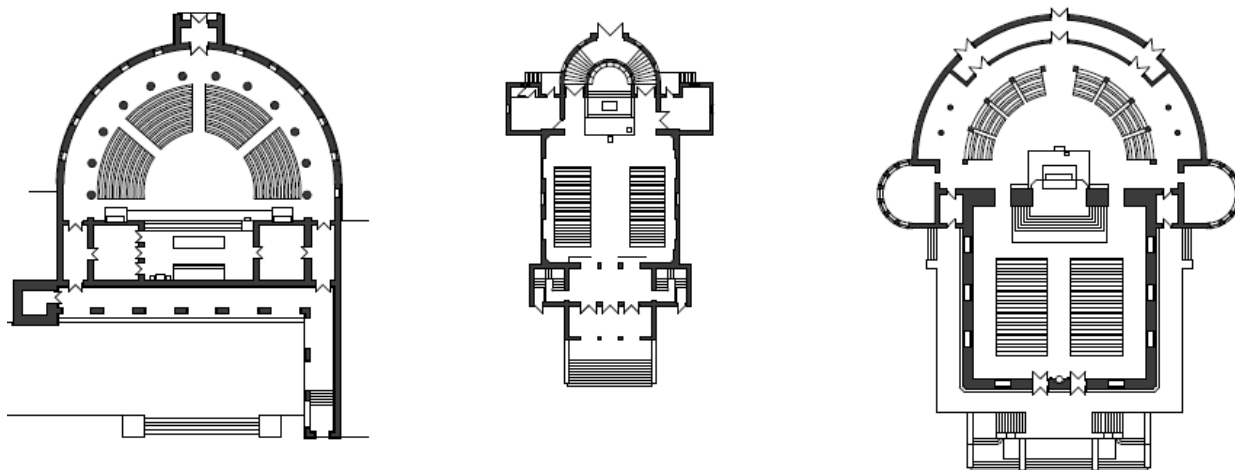


Figure 3 Churches with square and semi-circular floor plan from Sopron-Kurucdomb, Pécs Cemetery chapel, Pécs – Parish church

CONCLUSION

The underlying research of this paper explored Roman Catholic churches built in the interwar years in Hungary. The period can be regarded as an explosion in the construction of religious buildings, the comprehensive analysis of which, as well as the identification of trends necessitated the estab-

ishment of a complex typology. This typology and its subsequent evaluation have revealed evidence of the Church's commitment to its historical traditions, signs of which are inevitably apparent even in the most progressive modernist churches. Classic proportions, as well as symmetry, associated unequivocally with beauty since the antiquity, are palpable in the design and structure of these church buildings.



Figure 4 Parish church in Győr-Nádorváros, designed by Nándor Körmendy (photo: Eszter Hajós-Baku)

REFERENCES

- Nóra, Pamer (2001). *Magyar Építészet a két világháború között*. Terc. Budapest.
- András, Ferkai (1995). *Buda építésze a két világháború között*. MTA. Budapest.
- András, Ferkai ed. (2001). *Pest építésze a két világháború között*. Budapest.
- Eszter, Baku, Balázs, Csíky (2012). *Hagyomány és újítás: Katolikus egyházművészet a két világháború közötti Magyarországon*. In: Mózessy Gergely szerk.: *Prohászkat tanulmányok 2009-2012*. Székesfehérvári Püspöki és Székeskáptalani Levéltár, Székesfehérvár 2012. 286-308.
- Eszter, Hajós-Baku (2018). *Hagyomány és újítás: A centralitás történeti hagyománya és korszerűsége a két világháború közötti magyar templomépítészetben*, Phd thesis, Budapest University of Technology and Economics, Budapest.
- Eszter, Baku, Gergő, Kovács (2017). *A kulturális emlékezet rétegei: oszmán épületek emlékezte Magyarországon*. In: Ittész Gábor szerk. *Viszály és együttélés. Vallások és felekezetek együttélése a török hódoltság korában*. Universitas, Budapest, 425-448.
- Zorán, Vukoszávlyev (2012). *Unifying the Community: The Evolution of Centralized Space in Hungarian Church Architecture 1900-2010*. In: Hilde Heynen – Janina Gosseye szerk.: *Proceedings of the 2nd International Conference of the European Architectural History Network*. Koninklijke Vlaamse Academie van België voor Wetenschappen en Kunsten, Brussel, 364-365.

Eszter HAJÓS-BAKU

Art historian, expert in preservation of built heritage. Graduated from Peter Pázmány Catholic University as an art historian in 2009. She was a PhD-student (2010-2013) at the Budapest University of Technology and Economics, Faculty of Architecture, Department for History of Architecture and of Monuments. She received her PhD degree in 2018. Her main research area is sacred architecture in the interwar period especially in Hungary, with a special interest in foreign parallels, and the connection between architecture-liturgy and structure. She has coordinated some own research projects focusing mostly on sacral architecture between the world wars in Hungary and also has participated in Department related surveys. Besides the research of interwar period church architecture, she has a special interest in historical plaster casts. Recipient of the 3 years research scholarship of the Hungarian Academy of Arts Research Institute of Art Theory and Methodology.