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WHO PLAYS WITH WHOM? ARCHITECTURE, THEOLOGY AND CONSTRUCTION AS ASPECTS OF THE DESIGN OF AN ORTHODOX CHURCH

KTO Z KIM GRA? ASPEKTY PROJEKTU ŚWIĄTYNI PRAWOSŁAWNEJ Z UWZGLĘDNIENIEM ARCHITEKTURY, TEOLOGII I KONSTRUKCJI

A b s t r a c t

The process of designing an Orthodox church includes several conditions which significantly affect the final outcome. Only two groups of aspects mentioned in the paper, theological and construction, considerably narrowed the array of solutions. This shows that the designer is limited in his choices to a confined portfolio of solutions. This again explains why the architecture of Orthodox churches, irrespectively of their location or architect, is similar and distinctive.

Keywords: designing, Orthodox church, church structure

S t r e s z c z e n i e

Proces projektowania świątyni prawosławnej wskazuje na szereg uwarunkowań znacząco wpływających na końcowy projekt. Jedynie dwa zaznaczone w pracy czynniki, teologiczny i konstrukcyjny, zdecydowanie ograniczyły liczbę rozwiązań. Wskazuje to na ograniczenie projektanta do wyboru efektu końcowego w wąskiej grupie rozwiązań. Nie przypadkowo więc architektura cerkwi, bez względu na miejsce jej wybudowania, czy nazwisko autora, jest zbieżna i na ogół rozpoznawalna.

Słowa kluczowe: projektowanie, świątynia prawosławna, struktura świątyni

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1. Introduction

Architectural design is a specific puzzle game. The architect joins the game as the key player. He creates architectural solutions on the basis of his own knowledge, experience and aesthetic taste. Any tender for architectural design shows the above, as the number of participating architects usually equals the number of original architectural solutions.

Nonetheless, on closer inspection, this design puzzle reveals specific boundary conditions. These are the laws of physics, the construction regulations, or the investor's requirements, to name just a few. In fact, these conditions constitute the rules of the design puzzle and oblige the architect to strictly adhere to them. Consequently, even though the architect is the chief creator of his work, his participation in puzzle solving, resulting ultimately in an architectural design, is limited by the said 'rules of the game.' The greater the number of rules, the more arduous designing becomes, while the final effects of different architects' work become more similar.

It occurs that such imposition of further design conditions may lead in the end to limiting architectural work to a very narrow set of solutions. Thus, a situation may be taken in which the number of rules for the design puzzle is so great that, to a large extent, the rules themselves decide on the final design result. Designing a church is undoubtedly a case in point. Here, above all aforementioned stipulations, theological requirements are imposed. The matter is even more complex when it comes to designing an Orthodox church, since architecture is in Orthodoxy a form of expression of the doctrinal tradition of the Church [9, p. 33].

2. Start of the game

For the architect, to design is to skilfully arrange a jigsaw puzzle of several factors in such a manner as to obtain the final result of a finished design ready for execution. Pieces of the puzzle may be such factors as: aesthetics, functionality, construction, building code regulations, land-use planning, laws of physics, technical solutions of infrastructure, etc. Depending on the type of the building, the design makes allowances for a greater or smaller number of rules, as some rules come into view while others disappear.

The following dissertation discusses the specific conditions which designing Orthodox churches entails. Due to the limited size of the thesis, however, only two categories of conditions are analysed: theology- and construction- related.

3. Rules of the game – theology

In commencing design of a church, no matter of which rite, it is necessary to look at the building as a place intended to hold religious services, prayers of the faithful, but also as an edifice expressing principles of faith. This is clearly visible in the architecture of the Christian church, which refers directly to its Old Testament model [18, p. 609]. It was in the Old Testament where God, through his prophet Moses, gave people precise directions on the look of the Tabernacle [2, Exodus 25, 10–40; 26, 1–37; 27, 1–19; 30, 1–5; 35, 4–19. 36, 8–38; 38, 10–20; 40, 33]. Thus, architecture became the expression of the Doctrine of the Church.

This relationship is particularly evident in the Orthodox Church. For Orthodox believers, the architecture and internal design of a church constitute not only an illustration, in the

sense of *Biblia pauperum*, but rather an embodiment of transcendental reality. The architectural forms of the church, frescos, mosaics, icons, utensils and vestments live, included in the mystery of liturgy [12, p. 55]. Saint Symeon of Thessalonica commented on it directly: "Therefore the church is the house of God, despite it being constructed of matter without spirit [14, p. 179]." The thought was further developed by Saint John of Damascus who argued that the church is a representation of the whole of creation [5, p. 232]. He also emphasized the obligation to follow the model that had been given, referring to the words God had spoken to Moses: "And look that thou make them after their pattern, which was shewed thee in the mount[2, Exodus 25, 40; Hebrews 8, 5]".

It is worthwhile to examine a few selected elements of the symbolic structure of an Orthodox church – symbolic because symbol in the realm of the sacred is of fundamental meaning. Only with the use of symbols one can directly convey the unconveyable, and the history of Church proves that symbol has been an essential category [15] [16].

To begin with – the dome – the most obvious element of the Orthodox church. The symbolism of the dome is naturally related to the idea of heaven. "There the vault extends above like the sky without columns (...) and its dome is like the highest of heavens [7, p. 32]." – This is how St. Maximus the Confessor described the dome in his hymn worshipping the church of St. Sophia in Edessa. The significance of the church dome is emphasized particularly strongly in the Orthodox Church. The cosmological symbolism of the structure of the church, and the church nave in particular, as representing the cosmos, "a new heaven and a new earth" or "Heavenly Jerusalem," has been rooted in the religious consciousness since its beginning [15].

Another structural element of the church are the pillars, columns and walls. They appeared as early as in the Old Testament in the Tabernacle [2, Exodus, 10–18; 36, 36–38; 38, 10–20], in the Ark of the Covenant [2, Exodus 25, 10–22; 37, 1–9], as well as in Solomon's Temple [2, 1 Kings 6]. In the New Testament Jesus Christ was called a Column [4, p. 271] on several occasions, while in the Acts of the Apostles St. Paul names James, Cephas and John the pillars [2, Gal 2, 9]. The Church Fathers also invoked the symbol of pillar. St. Andrew of Crete wrote in his *Encomium* to St. Nicholas the Wonderworker of Myra: "I call you the pillar and the foundation of the Church (...) [1, p. 229]". It must also be noted that the location itself of the abovementioned structural elements of the church generates symbolic interpretation: the internal pillars of the church symbolise saints, while engaged columns – the angelic forces [6, p. 128].

Finally, an element which must be discussed here is the iconostasis, as it is inseparably connected with the Orthodox Church and through its form radically influences the interior of the church. For the believers the iconostasis constitutes a wall separating the sanctuary from the laymen, while in fact it originated on entirely different grounds. It was not to separate but to unite heaven and earth. The iconostasis – with its architectural meaning, combined with the idea of the church as a microcosm [18] and interacting with frescos and polychrome decorations, creates its own peculiar iconographic program of the church. As Paweł Floreński said, an icon does not represent but reveals, and the iconostasis is a revelation [8, p. 84]. While designing an iconostasis one must first and foremost serve its theological purpose, whereas its aesthetic expression is of secondary meaning. Mircea Eliade aptly commented on it: "The rite of creating the sacred area is effective as far as it recreates the work of God [3, p. 152]".

The three examples given above are sufficient to show clearly of how great importance are architectural elements of the Orthodox church for the theological program of the Church.

Still, aside from the aforementioned, there are also foundations, supports, vaults, spheres, arches, arcades, friezes, cornices, stairs, tops, pediments, towers, bell towers, windows, doors, etc., and their location in the church, as well as their form, cannot be accidental.

4. Rules of the game – construction

This outline of principles regarding the theological idea of the church is to be in a way overlaid with a construction design which can simultaneously ensure the load bearing capacity of the church and create the form desired by the architect. This was an especially difficult task when the first Christian temples had been erected. At that time, on the one hand the designer was expected to obtain great volumes without the use of intermediate supports, while on the other hand his work was limited by the capabilities of the materials – all he could use then was stone and brick and those materials had limited bending parameters. The set of solutions to the task thus formulated was therefore very narrow, leaving the designer solely with structures based on the idea of arch, which is a construction of compressive stresses rather than tensile ones.

The wide use of arches and domes, which were also the desired forms from the theological perspective, quickly led to the creation of impressive large-span coverings in sacral buildings. Of this the Pantheon was the ultimate example, with its monolithic dome with a diameter of 43 metres [10, p. 303]. To obtain such a considerable span was possible not only thanks to erecting a construction which employed compressive stresses, i.e. the dome, but also by giving it specific dimensions, that is the height of the dome, measured from its base, was equal to the dome diameter. Such a dome could contain a sphere, a form with a unique meaning in both geometrical and cosmological senses [15, p. 165–167]. Further methods of creating even more powerful and impressive sacral spaces called for the use of additional construction forms. Examples of this were systems of pillars, arches, walls and side domes, all visible in the structure of Hagia Sophia, an edifice considered to be one of the greatest, both in terms of architecture and construction, to have been built in the first millennium AD [13, p. 246–258].

5. Result of the game

Even though only two categories of conditions are discussed briefly in this paper, the example of Orthodox church design shows clearly how dramatically they limited the number of design solutions. It is also worth noting that although the analysis of church construction proves that the architectural proposals based on theological symbols are often simultaneously the best solutions from the point of view of construction mechanics [11], designers are still very restricted in their choices. It is therefore not accidental that the architecture of Orthodox churches, irrespective of their location or the name of the architect, is similar and distinctive in shape. This allows the conclusion to be drawn that in this particular case the rules of the design game are of such a strict and rigorous nature that they force the designer-player to look for a very small group of similar results of the game or, rather, design solutions. These rules, however, cannot be perceived as limitations but rather as an inherent part of the design puzzle, as important as the designer who takes part in the game. The outcome of the game is the design of a perfect church, fulfilling all the requirements given.

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