

# Rotundal temple in Russia: european roots and Russian traditions

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**Abstract.** The article presents the results of a comprehensive study of rotundal religious architecture, presented in the world and Russian architectural theory and practice. The appeal to this topic is due to the extreme rarity of the rotundal forms in the cult architecture with the high architectural and artistic merits of the rotundal temples, created during the centuries-old period from the 6th century B.C. to the 19th century A.D. The sequence of the development and inner interrelation of rotund-temples of different times and peoples is briefly described. The historical analogies of rotundal form development in the world and the Russian architecture are conducted. The ideological, aesthetic and socio-economic origins of the emergence and active use of rotundal forms in the Orthodox church architecture of Russia from the middle of the 18th to the first third of the 19th centuries are analyzed. Attention is drawn to the volume-planning and compositional solutions of Russian rotund temples that distinguish them from the rotundal churches of other countries. The symbolic significance of rotundal forms in the cult architecture in its historical development is considered. It is pointed out that the rotundal form corresponds to the sacred significance of the architecture of Russian Orthodox churches.

## 1. Introduction

The history of the world architecture gives us an idea of the history of the origin and formation of architectural types in their interrelation with social, political and economic processes. A special type of cult building that was born in the primitive communal period, but not widely spread, was the rotundal church. The formation of the rotundal temple as an integral architectural type with certain volume-planning and compositional solutions took place unevenly. A centuries-old period from the 6th century B.C. to the 18th century A.D. showed the world a number of such temples, most of which belong to the ancient world. In certain historical periods, only single rotundal churches appeared that did not form a specific typological group. Particular mention should be made of the construction of rotundal temples in Russia. This is a kind of phenomenon. No type of religious buildings has such clearly defined boundaries: regional, temporal and social. The round form was used extremely rarely in the cult architecture throughout the history of mankind. At the same time in Russia for a short period from the middle of the 18th to the first third of the 19th centuries nine types of rotund-temples were formed. We have developed a typology of rotundal temples in the world and Russian architectures [1]. The plan of the temple was laid in the basis of the typology. The main volume of the rotundal temple has in plan a circle shape or a regular polygon. The rotunda is covered by a closed vault or a dome leaning directly on the outer walls or internal supports without the use of additional structural elements (sails,



tromps). The stable typological features of rotundal churches were determined by the presence and composition of the main volume-planning elements (porch, bell tower, refectory, apse) with the main rotundal volume of the temple. When composing the typology, the original volumetric-planning solution of the rotundal church was revealed. Not included are the later annexes used to increase the area of the temple.

## **2. Origins of the rotundal form of the temple in Russia**

Rotundal religious architecture is a special kind of church construction that is unconventional for Russia. Russian rotund-temples are interesting for us precisely because they are an example of the emergence and comprehension of a new form that did not initially correspond to the Orthodox ritual. The rotundal form was not associated with the Russian traditions of temple construction. It assumed a small size of the rotundal temple and its small capacity, even when the dome leant on the inner ring of supports. Most of the rotundal temples discovered on the territory of Russia were built in the short period of the late 18th and early 19th centuries. The main area of their construction is the estate of noblemen and representatives of the wealthiest strata of Russian society in Moscow and the Moscow region. In St. Petersburg and its environs, no more than five rotundal temples were built, one is known for a rotundal church in the Russian North and in Siberia. A unique region, remote from the capitals, where in the first half of the 19th century a peculiar center of cult rotundal architecture was formed, became the Ural Region. The customers for the construction of Russian rotundal churches were, in most cases, large land and plant owners. The authors of the projects are well-known Moscow and St. Petersburg architects and masters of their circle, among them such outstanding architects as V.I. Bazhenov, M.F. Kazakov, N.A. Lvov, O.I. Beauvais. [2-11]

A special period of the appearance of the rotundal form of the temple on Russian soil falls on the era of classicism. This is the period of active development of the architectural theory and its practical implementation. From the middle of the 18th century humanitarian social sciences and architectural education in Russia have been developing. The Russian architect becomes an increasingly enlightened man, whose aesthetic views are formed under the influence of humanistic ideals. Theoretical comprehension of the architectural heritage is no less important than the practical use of architecture. The main book in the training of architects is the theoretical work of Vitruvius. Relations are developing with Western Europe, where retirees of the Academy of Arts go to study. They receive not only new knowledge and skills, but also experience in competitive design. Invaluable is the experience of their own emotional comprehension and comprehensive study of historical buildings and contemporary European architectural practices. N.A. Evsina writes: "In France, first of all, they comprehended the essence of contemporary art, which, of course, did not exclude a steadfast interest in the works of French masters of the past, various collections, "antiques" in particular. In Italy, on the contrary, the focus was on the art of the past centuries, antiquity." [12] Not only the ancient heritage, but also the architecture of the Renaissance, especially the works of Andrea Palladio, were taken as an ideal for the perfection of their own craftsmanship. In Paris, the attention of the retired and enlightened travelers was attracted by the buildings of classicism. Those who did not have the opportunity to go to Europe studied the architecture of books, ouvrages, prints, classical treatises (Vitruvius, Palladio, Vignola, Bernini, etc.), practical guides, reports and journals of the pensioners.

The desire to follow the best examples, the program task of achieving perfection became the basis for the Russian architects to use the ancient images and, in particular, rotundal forms, in their architectural practice. They fully met the requirements of classicism "perfection, harmony, ideal." A circle is in a certain sense an ideal geometric figure - out of all closed curves of a given length, the circle limits the area of the maximum area. The circular form of the construction plan has correspondingly certain technical and economic advantages. It is perceived as an ideal and, from an aesthetic point of view, an absolutely complete and integral internal space of the structure, creating the impression of "cleanliness" and harmoniously balanced rest. Apparently, the successful utilitarian use of round buildings in the plan at the dawn of mankind later led to the sacralization of this form.

The emergence and active use of this type of building as a rotundal temple in Russia in the second half of the 18th – the first third of the 19th centuries had not only ideological, aesthetic, and socio-economic prerequisites. The latter arose in connection with the active construction of country estates of various sizes, which was primarily due to the cancellation of military service for the nobility. Expansion of economic activity in the noble domains promoted both the new construction and reconstruction of old buildings in accordance with the artistic ideals of that time. The formation of the Russian manor culture was associated not only with the general architectural tendencies, but also with the artistic tastes of their inhabitants, the active role of the customer. Many of them were educated people, had good libraries, traveled around Europe and were familiar with the “present taste” in architecture. The lack of regulation by the state and the relatively small scale of many estates also created the opportunity to use the rotundal form for a modestly sized manor church.

The largest typological concentration is reached in Russia, rotundal temples with a longitudinal-axial composition, which developed along the west-east axis. The founder of the new, not met in other countries, type such as the rotundal temple was the great Russian architect Matvey Fedorovich Kazakov. The dome rotunda replaced in his work the traditional cube of the Moscow church, built from the 17th century on a three-part scheme as a “ship”. Rotund-temples, constructed according to this scheme, have a spatial composition with consecutive bell-towers, a refectory and a basic volume in the form of a rotunda. Most of the churches of the late 18th – early 19th centuries were built, and the earlier centric churches were completed according to this composition scheme. “It is in Kazakov's work that the deepest internal rethinking of the national artistic traditions of architecture is carried out to the greatest extent on the basis of the establishment of the ancient order forms of the Palladian classics.” [5] The great interest of Russian architects of the era of classicism to the image of the rotunda led to the typological diversity of rotundal churches in Russia.

### **3. Rotund-temple as a model of ideal perfection**

The rotundal form begins its development from the round in terms of funerary constructions of various peoples, in the ancient world the first types of rotundal temples were formed. On their basis, early Christian rotundal structures appeared, which were further developed during the Renaissance and Baroque periods. In the history of the world architecture, the rotundal form was often used in cemetery chapels, family burial vaults and mausoleums. Obviously, this form best reflects the essence of the structures designed to serve the eternal rest and memory of the departed. N.V. Pokrovsky, responding to a question about the relationship of Christian and Greco-Roman rotundas according to their internal significance, writes: “Round buildings of the Greco-Roman world came from monumental tombstones. At first, according to the natural order of things, these structures had small dimensions, and then, as they expanded, it was possible to observe a cult in them in honor of the deceased. ... The round form, therefore, was very popular here and was transferred to other non-cryptic temples. We also meet it with Christians – and sometimes with the same meaning.” [13]

The ancient Slavs used for their sanctuaries round constructions. Ideally round shape was often given to pagan sanctuaries in the open air. Interesting in our research is the origin of the word “temple”. B.A. Rybakov writes: “The round form of the sanctuaries defined their name as “хоромы” (from “хоро” – a circle), and in another pronunciation – “храмы” temples. Later the churchmen kept this very ancient word behind the Orthodox ritual buildings, although their form did not correspond to the etymology of the word “temple.” [14] In the 10–11th centuries in Russia they began to build so-called “round” churches, which are octagonal log buildings. However, the figurative composition of the Russian medieval church was connected not so much with the centric form of the plan as with the high-rise construction of the hipped structure, personifying the ideal of beauty with its aspiration upward toward God. It had such a form of plan and a purely utilitarian value – the possibility to increase the area of the temple while preserving the length of the logs. The largest volume of the church, cut by the octagon, made it possible to heal to it the quadrangles of the porch, the altar and the two chapels.

Most researchers agree that regardless of the historical reasons for the origin of the various forms of the Christian church, each of these forms has a symbolic meaning, recalling some invisible sacred side of the Church. The circle is a universal sacral symbol, signifying integrity, unity of infinity and completeness, and the center of the circle is the limit of rest and supreme perfection. Round forms express the idea of the sky and remind that the Church of God will exist endlessly. The whole interior space of the rotundal temple helps to bring to the absolute the divine peace and harmony, nothing distracts a praying person from communion with God. Almost at every point of the rotundal temple, a person is in the dome space, that is, that part of the temple that is the symbol of the transformed created world, the “new heaven” and the “new earth”. The entire rotundal temple is the center in which a person remains alone with God the Almighty.

Andrea Palladio, talking about the form of the temples in the Fourth Book of Architecture and referring to Vitruvius, argues that the ancient Greeks chose for each god a proper form of the temple. So the round form they chose for the temples of the Sun and the Moon, “... as they constantly revolve around the universe”, as well as for the goddess of the land Vesta, as this element is round. Palladio writes: “That is why we, even though do not worship false gods, but, observing the proper dignity in the form of temples, we will choose the most perfect and excellent form, and since this is a circle, for all figures it is the only simple, homogeneous, even, solid and capacious, we will make the temples round; for in fact to temples this figure is proper: and for sure, being enclosed in one border, in which it is impossible to find a beginning or an end, and one cannot distinguish one from another, and having parts equal to each other and equally involved in the figure of the whole, and, finally, having edge, in each part equally remote from the center, this figure is highly capable of embodying the unity, the infinite essence, homogeneity and justice of God.” [15] Thus, the form of the rotund-temple that had come from antiquity was considered by the masters of the Renaissance as the ideal for the Christian Church, both from the point of view of its sacred meaning, and from the point of view of its strength and durability.

Russian architects, who in their own way perceived and developed the rotundal form that came to us from Western Europe, also considered this form to be an example of ideal completeness. The rotundal form most fully expresses the idea of sobornost (conciliarity), where during the service all believers are in a single under-dome space. Here it is necessary to note one more difference of the Russian rotundal churches. It is associated with the shape of the dome-bulb, which completes Russian Orthodox churches, including rotundal ones. This is how the Russian philosopher and philologist Prince E.N. Trubetskoi defined this difference: The Byzantine dome above the temple represents the heavenly vault that covered the earth. On the contrary, the Gothic Spitz expresses an uncontrollable ascendancy, lifting stone masses from earth to sky. And, finally, our domestic "bulb" embodies the idea of deep prayer burning to heaven, through which our earthly world becomes involved in the otherworldly wealth.” [16] The sacred significance of the architecture of Russian Orthodox churches is that the temple of God expresses itself an ideal, the heavenly future, which humanity has not yet reached. The plastic forms of the rotundal temple correspond to this desire for a different ideal reality.

#### **4. Conclusion**

The main influence on the architecture of Russian rotundal churches in the mid-18th – the first third of the 19th centuries was rendered by the image of the ancient temple and the West-European temple of the era of classicism, the architectural theories of the great masters of the Renaissance. Creative processing of architectural heritage was conducted by Russian architects without direct reproduction of Western European or other designs on the basis of Russian traditions of temple construction. The process of rethinking and interpretation of the classical samples of the architectural heritage led to the emergence of the most numerous typological group of three-part-axial rotundal temples “by ship”, not found in the cult architecture of other countries.

The rotundal temple became a practical embodiment of the desire for ideal forms, combining technical and artistic perfection with symbolic meaning. The most active construction of rotundal temples was conducted during the periods of the rise of humanistic ideas and on the wave of

“historicism” – the creative rethinking and interpretation of classical architectural heritage samples. Rotund-temples, embodied in life or left only on paper, delight us with the unity of the perfect architectural and artistic forms and sacred meaning, the high professionalism of their creators.

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