

DESIGNING AN ICONOSTASIS OF AN ORTHODOX CHURCH

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ABSTRACT

In modern design, non-standard approach is encouraged and there are many unique design solutions. Here however, another approach will be considered which pertains to certain standards – canons – in design. An individual iconostasis project was developed for the needs of the Orthodox Church, in accordance with all the canons and meeting the requirements of the church board. This project also preserves the national cultural heritage by employing the dying craft of woodcarvers. The iconostasis was designed for the church in the village of Vladimirovo, respecting the canons and the traditions in wood carving. A project for a bishop's throne was also created.

Key words: design, iconostasis, wood carving.

INTRODUCTION

A main element of the interior space of Eastern Orthodox church buildings is the iconostasis. The spatial solution purpose of the composition is to separate the altar space from that of the nave (pravoslavieto.com, 2022).

The size, the shape and the appearance of the iconostasis, dividing the interior of the church, are the main functional-compositional factors which determine the composition of the church building itself and dominate the space.

The traditions of creating iconostasis architectonics date back to the early Byzantine Era. This is a tradition of such a strength that the scheme (canon) of an ancient façade, adopted for the iconostasis, persists through the centuries and is preserved with only minor changes in the layout style to the present days. (Milcheva, 1979).

In the middle of the 19th century, inherent to the Baroque compositional principles were adopted for the interior space of Bulgarian churches, and the iconostasis, as part of the spatial solution, was changed in accord-

ance. Guided by the principle of subordination, the central nave grows in height and width, the columns become thinner due to a change in the construction techniques, and the interior space is immersed in an abundance of lighting coming from the wide glass windows. The wooden wall of the iconostasis curves in, receding as the longitudinal axis of the church expands, and the upper row of icons overhangs the large colonnade in one or more indentations in height.

The main material from which the iconostasis is built is solid wood. This allows all parts of the iconostasis to be carved to match the colourful richness of the interior, of which it is an inseparable part. The baroque principles of the details of the whole are also observed in the major part of the wood-carved decorations. The elements are large, not particularly detailed in order to be perceived from afar. Plant ornaments and figures of birds are predominant. Blooming flowers, vine and acanthus leaves, lace and fringe are profusely woven into the ornamental material. The practice of gilding creates a complete impression by interweaving the light beams on the richly carved common base. In

the carving used in the iconostasis, apart from the skilful combination of lines and shapes from which the motifs are built, the decorative effect is primarily sought in the composition layout modelling and the resulting play of lights and shadows in the bas-reliefs. It is characterized by its three-dimensionality. It is intended to always be observed from the front, and the depth of its relief normally varies from 3 to 18 mm.

Observing the canonical requirements and in the traditions of the Bulgarian woodcarving schools and their techniques, an iconostasis with a length of 5.60 meters was developed for a small church in the village of Vladimirovo. Due to the size of the church and the budget, the iconostasis has one row of icons and an additional option for two rows. Besides the creation of a beautiful work of art, the project helps preserving the already dying craft of the woodcarvers. (Iart.eu, 2022). In addition, a bishop's throne was also designed in the same style.

MATERIALS AND METHODS

The modern iconostasis has three doors:

In the centre, there is a double door called *the royal door* or *the holy door*. It depicts the scene of the Annunciation, often with the four evangelists, and sometimes including images of prophets. (Vasilev, 1952).

The south and north doors of the iconostasis are single. The Archangels Michael and Gabriel, as well as St. Archdeacon Stephen, are usually depicted on them. In some smaller churches, there is only one side door and sometimes the entrance is covered only by a curtain (pravoslavieto.com, 2022).

The icons are arranged in several tiers in height. The bottom tier represents the story of the Fall or the events of the Old Testament. In many churches this tier is missing. In the second tier are the big or the so-called *royal icons*. The third tier of icons are of the

Twelve Great Feasts. The fourth tier depicts the St. Apostles and among them – the composition *the Deisis*. It is a representation of Christ Pantocrator, and on both sides of Him are the Virgin Mary and St. John the Baptist, whose hands are raised to Christ in supplication on behalf of humanity. In the fifth tier, the images of the Old Testament prophets are added, and among them is the composition *The Mother of God with the Child Jesus*. The sixth tier represents images of holy martyrs, saints and reverends. Above the royal doors there is a painting depicting the Last Supper, and above it – the Crucifixion of Christ. Above the Crucifixion hangs a special vigil lamp.

In smaller churches, the iconostasis contains only one tier of icons (the royal icons), usually arranged as follows:

- The icons of Jesus Christ who is the cornerstone of the church are situated on the right side of the holy doors. (Eph. 2:20-22) Next to them are the images of St. John the Forerunner and St. Archdeacon Stephen which are on the south door;
- The icons of the Virgin Mary are on the left side of the royal doors. Thus she is situated on the right side of the image of the Savior, as she was seen by the psalmist (Ps. 44:10). Next to them are the images of the church saint (or of the event to which the church is dedicated) as well as the icon of St. Archangel Michael, positioned on the northern door. (Vasilev, 1965; Georgi, 1977; Angelov, et al., 1998).

The material from which the iconostasis is made in most cases is oak or walnut. Icons are not permanently fixed and can be repositioned or replaced. Due to the size of the structure, additional strengthening is necessary achieved by beams installed behind the

structure. This would help to avoid unwanted movement caused by the doors opening or by their own weight.

The canons regarding the Bulgarian Orthodox iconostasis are indicated by (Angelov, 1986; Gergova, 1993; Ivanova et al., 1979; Koeva, 1979; Koeva, 2003).

RESULTS AND DISCUSSION

The AutoCAD software was used to design the elements of the iconostasis. The main structure is divided into modules, which are pre-assembled and transported in sections to be installed in the church. Softwood beams are planned to be used for the construction. The conceptual project is shown in Fig.1. A construction diagram drawn on AutoCAD is shown in Fig. 2. The left part of the figure shows only the beam construction, and the right part shows the construction with the boards.

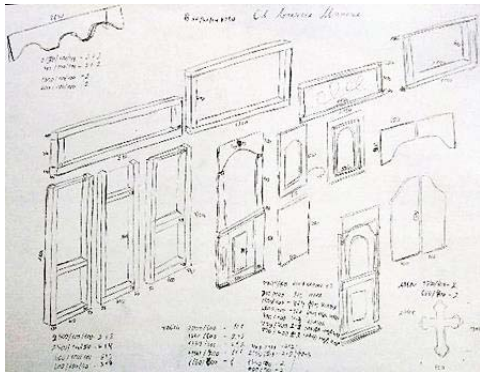


Figure 1: Conceptual Project

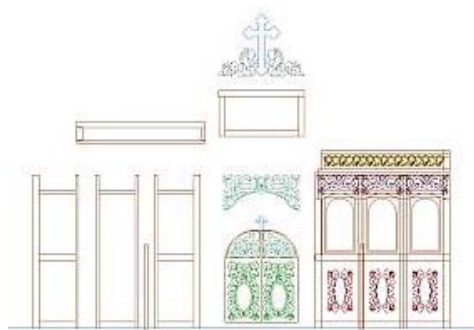


Figure 2: Construction Scheme

The front part of the iconostasis is made of linden boards with a thickness of 28 mm. In them, a relief with a depth of 15-20 mm, depending on the detail, is made by means of wood carving. The cover has a natural stain in dark brown colour to equalize the tone in the different panels and materials.

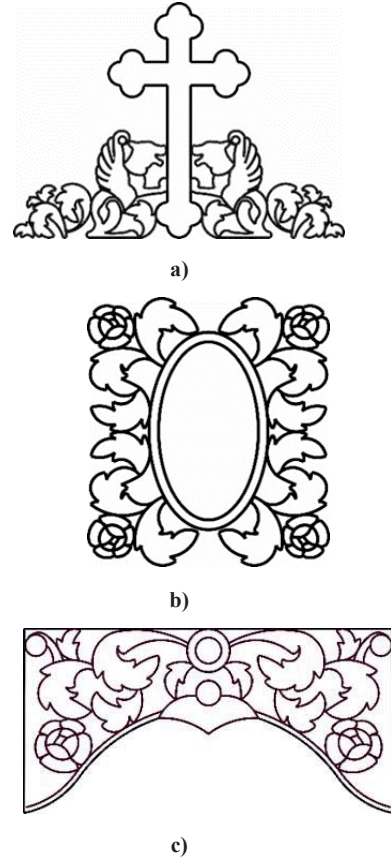


Figure 3: Iconostasis details. A cross (a), an icon pedestal board (b), and a lunette (c)

The Crucifixion is presented with a trefoil cross without decorations Fig. 3a. It is supported by two griffins decorated with stylized plant motifs. The details were chosen because of the symbolic meaning they have, as part of the church carvings, denoting the power of God and the courage given by faith. Fig. 3b shows the icon pedestal board for the first tier, filled with classic stylized leaves

and roses. The oval in the middle part allows for an icon to be made.

In the lunettes tier (Fig. 3c) the motifs from the icon pedestal boards are repeated. The pilasters are formed with three longitudinal edgings.

Details of the Royal Doors Fig. 4a-c. The upper part of the doors and the frames

are made of openwork carving. A stylized peacock is depicted on them. It is characteristic for the Renaissance style, highlights the details and symbolizes the beauty of the soul. It is placed above the doors and also denotes the immortality of the church and the human soul.

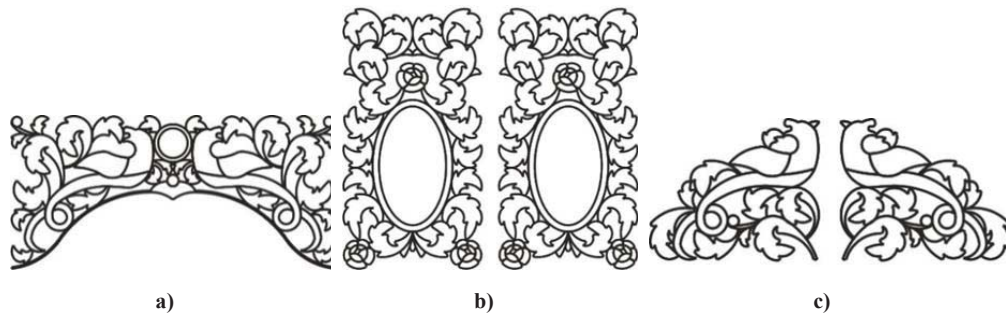


Figure 4: Details of the Royal Doors. Frame (a), board (b), openwork board element (c)

The Grapevine is shown in fig.5. The grapevine is the most popular symbol in Bulgarian woodcarving art and is one of the most commonly used church motifs. In Christianity, it is associated with wine, which symbolizes the blood of Jesus. The grapevine itself embodies wisdom, and the vine branches—the apostles. (Iart.eu, 2022).



Figure 5: Grapevine

Two versions of the iconostasis were developed, Fig.6. The first one (Fig.6a) is with a size of 5.60 x 4.30 and with one tier of icons. The second one (Fig. 6b) is with size 5.60 x 4.90 and with two tiers of icons.

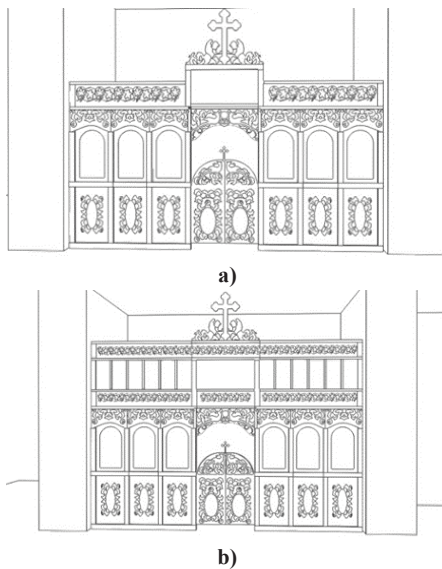


Figure 6: Project with one tier of icons (a), and two tiers (b)



a)



b)

Figure 7: Visualization of the project with one tier of icons (a) and two tiers (b)

Fig. 7 shows the preview of the two variants along with the icons arranged according to the canon. The Deisis is above the Royal Doors, and above it is the Last Supper. In one of the versions, the Last Supper is suggested as a panel of wood carving. A sample of the panel is prepared for the project (Fig. 9a) The material is linden with the relief is of a 20mm height. The sample is without its finishing coating.

Variant 1 (fig.7a) the iconostasis has dimensions of 5.6m x 3.3m and a one-meter cross above the central upper part. The total height will reach 4.3m

The iconostasis will contain in the first row Large sub-icon tables. Separated from each other with the help of pilasters

The second row is the Belt of Great Icons.

In the third row is the belt of, which complete the colonnade of the royal row. So far, the total height is 2.5m

Above it is the belt of Grapevine – a horizontal frieze with a stylized image of a vine. Together with the structure, the height reaches 3 m.

In the central part are the royal doors and a total size of 1.2m

Above the royal doors is the place for the Last Supper. The iconostasis in this part reaches 3.3m.

Deacon gates – north and south. Hidden doors with icons on them. They are located behind the second large icons. Here the trays of the first row and large icons are mounted on the door (fig. 8).

At the top is the central cross with a total height of 1 m.

Variant 2 (fig. 7b) the iconostasis measures 5.6m x 3.9m and a one-meter cross above the iconostasis. The total height will reach 4.9m

The iconostasis will contain in the first row Large sub-icon tables. Separated from each other with the help of pilasters

The second row is the Belt of Great Icons.

In the third row is the belt of, which complete the colonnade of the royal row. So far, the total height is 2.5m

Above it is the belt of Grapevine – a horizontal frieze with a stylized image of a vine. Together with the structure, the height reaches 3 m.

Above it is the Belt of Small Icons – "Apostolic Order" With a height of 60 cm.

With places for the icons of the 12 apostles and in the central part the Last Supper. To conclude, there is a second belt of the vine. The iconostasis reaches a height of 3.9m.

In the central part are the royal doors and a total size of 1.2m

Deacon gates – north and south. Hidden doors with icons on them. They are located behind the second large icons. Here the trays

of the first row and large icons are mounted on the door

At the top is the central cross with a total height of 1 m.



Figure 8: Deacon gates – open



a)



b)

Figure 9: A woodcarved panel of the Last Supper made for the project (a) and the throne (b)

CONCLUSIONS

The presented project preserves the traditions and complies with the canons in the design of the church carvings, which are an integral part of the church interior. The project is an original development and preserves the traditions of the Bulgarian wood carving. The project shows how the evolution of the modern aesthetics in woodcarving is combined with the traditional techniques in the craft in order to show its character and individual style.

The bishop's throne is located on the right side of the central nave. (pravoslaviето.com, 2022) Fig. 9b. presents the design and an example visualization of the throne as well as its construction diagram. The dimensions are 70 cm. and the total height is 2.5m. It represents an armchair with armrests, above which there is a place for the icon of the Jesus Christ. Above it there is a cross with a height of 50 cm. with carvings and friezes. The materials and the manufacturing techniques are similar. The projects have been approved by the Board of the church.

REFERENCES

- ANGELOV, V. 1986. Renaissance church carving. Semantic analysis. Sofia, 1986.
- ANGELOV, V., G. MIHAILOVA, V. KOSTADINOVA-KOVACHEVA, A. PRIMOVSKI, H. DERMENDZHIEV, S. BLAGOEVA-DANCHEVA, P. MITREVA. 1998, A Panorama of the Renaissance applied arts, AI "Prof. Marin Drinov" 1998. ISBN 9544304215.
- GEORGI ARBALIEV. 1977. Construction and artistic traditions of Bulgarian architecture, Technica, Sofia 1977.
- GERGOVA, I. 1993. The early Bulgarian iconostasis 16.-18. century. Sofia, 1993.

- IVANOVA, V., KOEVA, M. 1979. The plastic wealth of the Bulgarian Renaissance church carving. Sofia.
- KOEVA, M. 1979. Appearance and compositional development of the iconostasis IV-XVIII centuries // Problems of art. Sofia, 1979, No. 2, pp. 46–52.
- MARGARITA KOEVA. 2003. Architectural Heritage and the Modern World. Collection of studies and articles. Varna: LiterNet, 25.12.2003.
- VASSILEV A. 1952. Materials for Trevna folk craftsmen and carvers. Sofia, IZIGA, No. 3–4, p. 222.
- VASILEV A. 1965. Bulgarian Renaissance masters. Painters. Carvers. Builders, Sofia.
- MILCHEVA H. 1979. Conversation about wood carving, Sofia.
- PRAVOSLAVIETO.COM. 2022. https://www.pravoslavieto.com/hramove/bg_ikonostas.htm.
- 1ART.EU. 2022. <https://www.1art.eu>



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