

ON CONSTRUCTION OF CROSSED-DOME CHURCHES BY MODEL IN THE NORTH CAUCASUS AND CRIMEA IN THE MEDIEVAL PERIOD

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The research has shown that a new system of world outlook, a Christian world view came to the North Caucasus together with church models. That said, the previous world view was not refused, but reconsidered through Christian teaching. The result of all this was that the essential trend of that period in the North Caucasus and North Black Sea region was imitation of the model's floor-plan diagram with some additions and changes. It was discovered that plan builder module in the North Caucasus and North Black Sea region was the size of the most figuratively important part of a Christian church – under-dome square side or altar apside depth. The size of the module corresponded to the “measure” of iconographic model and in most cases matched orgias used in byzantine world.

Key words: Church-building by model, crossed-dome inscribed-cross churches, medieval period.

INTRODUCTION

Building churches by model brought by a missionary was common for byzantine world of the 10-12th centuries on the whole and the North Caucasus and North Black Sea region in particular. The idea of models in church-building with its specificity characteristic only of medieval Christian culture predetermined the technique of its use for construction of churches in the centres of Christian culture and particularly in the provinces. Only oral communication concerning the basics of Christian teaching and visual and symbolic characteristics of a model was possible in the provinces, especially in cultures with no written language (as in the North Caucasus). Numerous texts dedicated to church-building are found in the Bible. They were undoubtedly retold within missionary work, in the region under consideration as well.

METHOD

The **method** of the research is based on the proposition of community of world view principles and differences between its visual and symbolic characteristics in the culture of people of the North Caucasus in pre-Christian and Christian periods. Dual nature of Christian church-building of the period under consideration identified with the help of this method is determined by a set of traditional notions and methods used in sacral objects on the one hand and “model” directives of Christian culture, which are universal and, at the same time, individual in accordance with confessional

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centre spreading the Christianity. In this research it is the influence of traditional culture components on Christian universal culture that comes to the forefront.

DISCUSSION

It had been considered that only particular people (churchmen, heads of states) could accept the revelation and “see” the future church; they are presented in the documents below where the laying of churches is described and they were architects in the modern sense. Those building the church were not among them, they were only technically implementing the design of God the information about which they had received from a particular person. This divine vision of a model is recorded in most medieval texts dedicated to the history of church-building, and in these visions a model usually included both the measure and the principle of its use. At the same time, V.A. Nikitin and V.V. Bychkov found a method of work on iconographic models established in Byzantium in the 9-11th centuries [1;2], which presupposed repeated creative implementation of once “seen” divine image of a church. In the provinces, especially where people who were being introduced to Christianity again lived, this principle had to be determinative.

However, there is no denying that builders were entrusted with an incredibly difficult task – to materialise the received description, oral one in the region under consideration, in the image of a particular church. There was no direct information about the type of church and its plan-space composition in the description while their range in Byzantium and its provinces of that period was rather diverse. And here the system of architectural and constructional preferences established by the 10th-12th centuries in a particular confessional centre – Byzantium, Armenia, Kartli, etc. – was of direct relevance to architecture. At the same time, architectural characteristics of a church being built by an iconographic model were defined by primary importance of internal space determined by church service specifics which were reflected in numerous liturgy descriptions and interpretations starting from the 4th century (St Dionysius the Areopagite’s [3], Maximus the Confessor’s [4, p. 3-40], St Germanus’s [4, p.43-87]). For instance, in the interpretation of the Liturgy, dating from the 8th century, by St Germanus, who had great influence on the Christian world up to the 14th century [4, p. 32-41], only inner parts of the church and their symbolic meaning are described. In all these texts special symbolic meaning was given to the parts of internal space of Christian churches and details of liturgical setting, and perception of this meaning formed an integral part of what was going on in a church during church service. In the Middle Ages there had been many authors who gave symbolic interpretations, which can be divided into Old Testament, historical-topographic and eschatological ones [4, p. 19-20]. Many authors combined two and, sometimes, three types of interpretation. Symbolic interpretations of internal space of a church that had formed by the 10th century may be interesting in the view of the conducted research, as they were undoubtedly

present in missionary activity and surely reached the studied region. Symbolic interpretations of church parts and liturgical setting were an integral part of preaching Christ in new lands – they explained the meaning of the most significant elements of internal space of an introduced church architecture model.

Strong byzantine influence on the territory of the North Caucasus in the 10-12th centuries was identified, and documented similarity in layout methods in the Eastern Church centres suggests that methods of church stakeout, as well as measurements used in the region of consideration had to correspond to the ones used in Byzantium.

The most ancient measure was orgia equal to 10 feet or 3,12 m, which remained from the antique times and even had its own name, akaina [5, p.28]. A corresponding pole of the same name was used. This orgia was the most widespread in Byzantium and Asia Minor till the 10th century. Another orgia equal to 8 feet or 2.53 m was widely used in the same period. Since the 9th century an orgia equal to 6 feet or 1,87 m had come into use.

Such module was found in a recently discovered church not far from Sudak in Crimea. Its under-dome square equals two such measures or 3,8 m. Apart from this, the fact that there were no window openings – only small square holes in the upper parts of walls, which were apparently made for ventilation – is also indicative of the 9th century. The church has no decoration and is made from local stone; as archaeological evidence shows, it had been plastered from the inside and painted. Its crossed-dome system is rather clear (figure 1). The depth of apside equals to the indicated measure – 1,87 m. Its angular apsidal are of particular interest. Angular apsidal had been found in byzantine metropolitan churches in the 8-9th centuries and in the North Caucasus in churches along the river Mzymta; the central apside of the church in the village of Loo is also angular.

As a result, comparative analysis of documents and studies on byzantine and regional metrology has shown that in the 10-12th centuries orgia, a measuring module unit of byzantine world equal to 6,7,8 and 10 feet, as well as the byzantine church layout method in accordance with the module multiple of one of the abovementioned orgias, had to be introduced to the North Caucasus and North Black Sea region together with models of Christian church-building.

The abovementioned documented sources indicate that church layout in byzantine times started from identifying the parameters of the apsidal, after which an overall plan of the church was staked out. Almost all researchers studying module-metrological area (P. Underwood, K.A. Afanasiev, L.I. Bolshakov, A.V Radziukevich), who analysed module construction of churches of the Eastern Church, did it through the example of crossed-dome churches [6, 7, 8, 9]. L.I. Bolshakov and A.V Radziukevich came to the conclusion that overall dimensions of churches were based on macrolinear modules. According to K.A. Afanasiev, the side of under-dome square multiple of the *depth* of apside was this module size

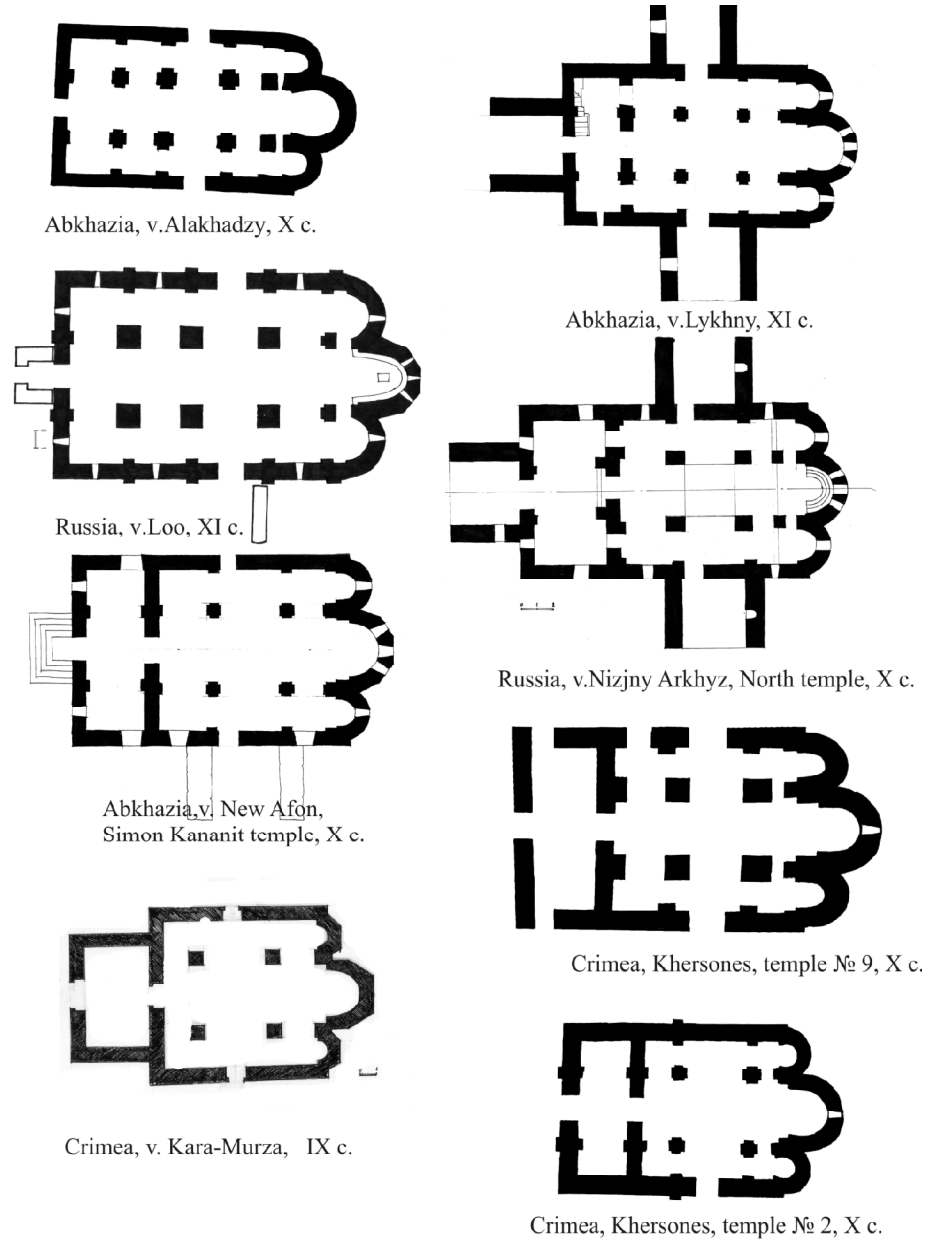


Figure 1: Cross dome North Caucasus and Crimea Temples

[10]. In P. Underwood's opinion, the church-building module in Byzantium was either under-dome square (in a crossed-dome church) or distance between the supports of central nave (in a basilica) multiple of a 10-foot orgia and the *depth* of apside.

RESULTS

The most symbolic graphic elements of internal space of liturgical setting were preserved in models of byzantine church architecture adapted in the North Caucasus and Crimea. Also, in that period the ambition of regional governors, who had adopted Christianity, to make the copy of a model seen, for instance, in a Christian centre as precise as possible can be explained by the fact that they wanted to create internal space in the church required for liturgy without missing a single element of it.

Therefore, in the period of consideration a new world outlook system, Christian world view, was introduced in the North Caucasus together with church models. That said, the previous world view was not refused, but reconsidered through Christian teaching. All this contributed to the fact that imitation of the model's floor-plan diagram with some additions and changes became an essential trend of that period in the North Caucasus and North Black Sea region. Such method of model use became possible in that period due to intentional Christianisation policy pursued by strong national unions in the North Caucasus, such as Alania, Zygii, Sarir, Nakhichevan union. Thus, another highly important factor determining the specifics of using the models in the studied region in the period under consideration was the role of the orderer.

Dynastic and political ties between the governors of the abovementioned nations were crucial. Close military ties between the governors of Abkhazia and Alania in the 10th century resulted in Abkhazia taking part in Alania's Christianization, which also influences volumetric and spatial characteristics of the churches built in the capital of Alania [11, p.8-15]. Establishments of links between Alania and Georgia in the 11th century also contributed to the introduction of Georgian church architecture models to south-western region of Alania (to Dvaletia). Appearance of such title as "exusiocrator" for Alania's tsars in byzantine sources of the 10th century is indicative of close political ties between Alania and Byzantium. The title was used in relation to Alanian tsars until the 12th century [12, p.51-53]. There was also a similar title for Abkhazia's tsar in the 10th century [13, p.600]. Along with political contacts, since the 10th century Alania had established close contacts with Patriarchate of Constantinople. There are known letters of Nicholas Mystikos about directing missionaries to Alania written in the beginning of the 10th century [14, C.253]. Such strong ties with Byzantium in the 10-12th centuries and its provinces of Asia Minor, as well as direct subjection of eparchies and metropolitanates of the North Caucasus to Constantinople could have contributed

to the fact that models directly from Byzantium and its centres of Asia Minor found their way to this territory.

On the basis of the conducted analysis the author has singled out two types of models – primary and secondary. Primary iconographic models were churches of confessional centres or neighbouring Christianised territories: the Chersonese, Bosphorus, Abkhazia, Asia Minor, Kartli, Armenia; secondary models were the churches that had been built in the region first. Churches built by secondary models had more expressed regional features [15].

CONCLUSION

The main method of implementing a model and its basic architectural and spatial characteristics in the North Caucasus in the middle byzantine period was laying out a building in accordance with plan-space composition “selected” by the orderer and corresponding to the system of architectural and construction preferences of a particular confessional centre. After that, the constructor’s task was to estimate the height of the building on account of proportion of the plan to ideas of the exterior form of the church specified by the orderer. In the period under consideration a regional governor together with a churchman acted as the orderer.

In a crossed-dome church overall length and width were often measured by inner wall contour, but it was not a general thing. In all crossed-dome churches of the North Caucasus and North Black Sea region the depth of apside was equal to the side of under-dome square. In the churches of confessional centres – Byzantium, Asia Minor – the side of under-dome square was equal to two-three apside depths and thus multiple of it. The abovementioned metrological research of byzantine monuments has shown that in inscribed-cross churches in Byzantium the side-aisle was half the width of the central aisle. The discovered rule is also found in byzantine basilicas. The author of the thesis discovered the same layout method in basilicas of the Chersonese, Abkhazia, Georgia, Armenia, North Caucasus. However, another principle was used in crossed-dome churches of Abkhazia and the North Caucasus; it was individual for each church, but also based on the module – the side of under-dome square equal to the depth of apside.

Therefore, it is hard to escape a conclusion that overall church sizes on the territory of the North Caucasus and North Black Sea region matched macrolinear modules, which to a certain extent corresponded to the instruments for church layout described in the Bible (“a 6-cubit stick, where each cubit is elbow together with the hand”, see as above). This means, the space of the church was “measured” by its most sacral element – the under-dome square, which was not a symbol of the “sky”, but the sky itself in the mind of a medieval person. That said, the side of the under-dome square in this region had always been equal to the depth of apside, which means that it was also a module – this was discovered during the study of domeless churches.

The most ancient module here is a module of approximately 3 m corresponding to the byzantine 10-foot orgia and measuring stick, "akaina", used in Byzantium since the 6th century.

The use of module equal to 3,3-3,4 m was found in a number of crossed-dome inscribed-cross churches of the 10-11th centuries: churches No. 2 and 9 in the Chersonese; in the villages of Alakhadzi and New Athos, the church of Simon the Zealot; in the village of Lykhny (Abkhazia); in the village of Loo (Krasnodar Krai), Severny Zelenchuksky church in the village of Lower Arkhyz. In each case space layout in these churches was conducted in compliance with certain rules different from other churches. Particular attention is drawn to a significant number (7) of churches of the same type, with similar overall sizes, situated on a rather small territory and built during a short period of time (10-11th centuries).

The use of this module is a specific feature of this group of churches in this region. The module does not correspond to any of byzantine orgias equal to 6,7,8 and 10 feet and is not found in the churches of Constantinople, Asia Minor, Trabazon, Greece and other byzantine countries. It may correspond to the "measure" of some undiscovered iconographic model or an error could have been made while taking this measure. Apart from that, a different layout method different from the ones used in most churches of Constantinople, Trabazon and the Chersonese as found in these churches. Longitudinal size of the church (church length) there is measured without matching the internal segmentation of the church: first, overall length was laid out, then the internal segmentation of the under-dome square, narthex and other segmentations were made. However, at the same time the under-dome square equal to the depth of apside remains the module. Crosscut layout was made without observing the rule of the side-aisle being half the width of the central aisle. First, general overall layout of the width was done: from one longitudinal side to another, not from the central east-west axis, as it had been done in Constantinople churches. In each particular case the layout had its own specific features. One of the general rules was that all three aisles were laid out by the equal size, while predominant width of the central aisle was made by laying out wall thickness (outward for the central aisle and inward for the side aisles). There were several methods of length layout: module – column – module; 1 ½ module – column – module. Each spatial church plan of this kind also had its own compositional features – elaboration of the altar part, bema, narthex, columns (right-angled or cruciform), etc., not to mention the significant difference in outside forms and construction methods. Some churches have the same portico shift along north-south axis (Severny Zelenchuksky and Lykhnenky churches, probably also the church of Simon the Zealot) (figure 2).

The use of the measure, which was not found in other byzantine regions in the 10-11 centuries, in leading and the most expressive churches accepts the opinion of the iconographic nature of models. The churches of confessional centres had



Figure 2: Temple IX century near Sudak

different measure which was greater in size, but the same floor-plan diagram. The conducted analysis allows to make several suggestions. First of all, this group of churches was built in accordance with one model and churches of this group were models for one another. Second, masters who built the churches were not members of a permanent construction brigade and were not sent from Constantinople. It is likely that the churches of this group had been built as a result of activity of one missionary centre, presumably situated in Abkhazia, as the Chersonese churches of this group date from the 11th century while the church of Simon the Zealot, Severny Zelenchuksky church and the church in the village of Loo date from the 10th century. However, no hierarchy between crossed-dome churches of the North Caucasus and North Black Sea region built by one model was found, which can be explained by the fact that eparchies and metropolitanates, where they had been built, were directly subject to Constantinople and, as a result, there was no hierarchical subjection between them.

The conducted metrological analysis has no such task as studying the ratio between smaller parts of churches and finding the measures which had been used for them. Small sizes which were the result of the layout happened to be multiple of “silk” cubit equal to 63,9 cm. It was also impossible to analyse overall height

sizes due to badly preserved monuments in the North Caucasus – it is not possible to make summary conclusions based on the analysis of 4-5 renovated monuments of different composition.

On the whole, the conducted modular analysis has confirmed the proposed suggestion that the module of plan construction in the North Caucasus and North Black Sea region was the measure of the most figuratively significant element of a Christian church – the side of the under-dome square or the depth of altar apside. The size of the module matched the “measure” of iconographic image and in most cases coincided with orgias used in byzantine times. The discovered example of use of such similar “non-standard” module in a number of crossed-dome inscribed-cross churches has confirmed the proposition that it is not that wide-spread byzantine measurement system, but the “revealed” model itself and its “measurement” that were first-priority for building a church on a newly cultivated in confessional meaning lands.

The discovered specific features and distinctness of Christian architecture of the North Caucasus allow to make several suggestions concerning the issue of preserving this unique part of the region’s historical and cultural heritage. Despite the fact that today most people in the North Caucasus profess Islam, all the studied buildings are considered as sacred objects of traditional culture by local citizens. Along with architectural objects, most regions still revere idolized objects of nature, such as sacred forests, groves, mountains, gorges. Therefore, preservation of existing system of architectural and natural cultural complexes is a crucial task in terms of preserving monuments and protecting mountain ecosystems from negative anthropogenic impact, as well as in terms of spiritual unity of the nations of the North Caucasus.

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