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Transformation of Church Architectural Composition in Ukraine between the Tenth and Eighteenth Centuries as a Theoretical Basis of Restoration

Przemiany kompozycji architektury kościołów w Ukrainie pomiędzy X a XVIII wiekiem jako teoretyczna podstawa rewaloryzacji

Keywords: church, Ukraine, architectural composition, Kyivan Rus, Baroque, restoration

Słowa kluczowe: kościół, Ukraina, kompozycja architektoniczna, Ruś Kijowska, barok, rewaloryzacja

Introduction

The church architecture of Ukraine is unique and occupies an important place not only in its national historical and cultural heritage, but also in the world heritage of UNESCO, for instance via such unique sites as St. Sophia of Kyiv and the Kyiv-Pechersk Lavra. The peculiarity of the architectural heritage of Kyiv (and the Right Bank of the River Dnipro and the Left Bank in general) is that it covers only a few historical periods—the Kyivan Rus period, the period called the Ukrainian Baroque, the period of classicism-Empire of the nineteenth century and the historicism and eclecticism of the second half of the nineteenth and the early twentieth century.

Due to historical reasons, there are no monuments of the Middle Ages and Renaissance in Kyiv, because after the devastating Tatar-Mongol invasion and the actual destruction of the city, Kyiv was fully revived only in the early seventeenth century, in the so-called early Baroque period. If we evaluate the architectural heritage of Kyiv in terms of its value and significance, the most significant structures, which represent regional and national features, date back to the Kyivan Rus period and the three periods of the so-called Ukrainian

Baroque. In this study, I deliberately limited myself to the periods of the tenth and eighteenth centuries, arguing that in the period of classicism-empire (due to the ban of the Most Holy Governing Synod to build churches in national forms) churches and cathedrals acquired a generalized classical form without any national characteristics, and in most cases they were built on typical so-called “exemplary projects.”

During the years of militant atheism, the church theme was banned, and those who tried to save churches and works of church art risked their own freedom and lives. It was during the 1930s that most of the churches, cathedrals and bell towers located in modern Ukraine were destroyed, numbering in the hundreds.

During the Soviet period of the 1960s and 1990s, both Ukrainian and Russian researchers actively published academic papers on the period of Kyivan Rus, which was also of ideological significance—to demonstrate the unity of the historical origins of Ukraine and Russia. Regarding the architecture of the so-called Ukrainian or Cossack Baroque, the situation was more complicated, given that the active benefactor and patron of church building was the disgraced Hetman Ivan Mazepa, who from the time of Tzar Peter I until the

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independence of Ukraine was treated as a traitor. The emergence of interest in the Baroque heritage, wooden church architecture was due to independence in 1991. It was then that scientific works on destroyed or little-known temples appeared, previously unknown historical evidence and archive materials were published.

The specificity of the development of the composition of the Orthodox church was the combination of canonical and purely decorative elements, and even in the canonical elements there were changes in their forms and decoration. Analysis of the processes of transformation of the figurative concept of the Orthodox church building of Ukraine is impossible without considering the influence of external factors on this process and similar trends in all elements of religious and cultural sphere, especially in theology, spiritual music, sacred art and architecture. All these components were combined.

If we analyze the processes of transformation of the composition of Ukrainian churches from Kievan Rus to Baroque, we can argue that such a constant process of change occurred against the background of changes in historical processes, political principles, cultural and ideological preferences, socio-cultural changes. The specifics of temple construction in previous centuries have influenced the existing trends in modern Orthodox church construction, which in its mass is marked by much greater conservatism compared to modern Catholic churches or Protestant temples. In Orthodox construction, copying samples of architecture of the Kyivan Rus and Baroque periods, Russian-Byzantine style, wooden church architecture is actively used. Less common is the innovative modernization of historical forms of the past or the use of completely innovative forms, due to the conservatism of the customer—the Orthodox clergy.

In the present study we sought to consider the process of restoration and reproduction of unique Kyiv churches through the prism of transforming the architectural composition of the Christian (Orthodox) church of Ukraine for several centuries, from the early Kyivan Rus period of the 10th century to the end of the 18th century, the so-called final stage of the late Baroque, and determine the role and place of Kyiv churches and cathedrals in this process.

To solve the set tasks, scientometric sources of recent years have been developed in the following areas:

- the problem of preserving the historical environment with architectural monuments is covered in scientific and metric articles of recent years [Spiridon et al. 2016; Spiridon et al. 2017; Pujia 2016; Kuśnierz-Krupa 2018; Ivashko and Ivashko 2017];
- to assess the role and place of unique temples in the historical and modern urban and natural environment of Ukraine the papers by M. Dyomin et al. [Dyomin et al. 2021], D. Chernyshev et al. [Chernyshev et al. 2020], and Y. Ivashko et al. [Ivashko 2020] were studied;
- studies of outstanding architectural monuments of this period were covered in publications by P.A.

Lashkarov (Lashkarov 1898), O.V. Sitkarova [Sitkarova 2000], V.B. Petychynskiy et al. [Petychynskiy et al. 1964], and M.I. Orlenko [Orlenko 2015];

- restoration aspects, the artistic aspect of restoration procedures (which is especially relevant for temple architecture) were analyzed by P. Gryglewski et al. [Gryglewski et al. 2020], M. Orlenko and Y. Ivashko [Orlenko and Ivashko 2019], and M. Orlenko et al. [Orlenko et al. 2020].
- The review of the literature allow for the formulation of the main objectives of this study:
- Analyze the specifics of the composition of the Christian (Orthodox) Church of Ukraine in different periods of Kyivan Rus and trace its transformation from the first to the third period, determining the role and place of Kyiv in this process.
- Analyze the specifics of the composition of the Christian (Orthodox) church of Ukraine in different Baroque periods and trace its transformation from the first to the third period, determining the role and place of Kyiv in this process.
- Present the general transformation of the composition of the Christian (Orthodox) church of Ukraine from the Kyivan Rus period to the Baroque period, determining what has changed and what has remained unchanged and defining the role of Kyiv in this process.

Materials and methods

The specificity of the tasks determined a certain range of general academic research methods. Methods of historical analysis and culturological analysis were used to develop a certain image of the church under the influence of external and internal factors. The method of comparative analysis was used to determine the phenomena of transformation of the composition of the churches of Kyiv in the context of general transformation phenomena. The conclusions were further substantiated by a visual analysis based on the graph-analytical method. As the volume of the paper did not allow to fully present an analysis the phenomenon of transformation on the entire set of indicators, including the morphology of forms, exteriors and interiors, a number of main aspects were chosen for comparison, resulting in an analysis of the composition of facades and proportions.

Results and discussion

The image of the Christian church of the ancient Russian period and the transformation of its composition from the early to the late period

It should be emphasized that since the baptism of Kyivan Rus in 988, Christian churches have occupied the most important places in the structure of Ukrainian cities. It can be argued that churches and cathedrals gradually began to actively influence the urban structure itself: they were placed on the most expressive

points of terrain with the possibility of forming distant perspectives, public squares were formed around them (for example, in front of the St. Sophia Monastery and St. Michael's Golden-Domed Monastery), churches terminated the vistas of streets and became important architectural landmarks in the urban fabric. The exposition of the churches, their special significance among other buildings, was emphasized by the architectural image itself—three-dimensional composition, monumental forms, active dynamic silhouettes, the morphology of their forms and lavish décor. It is no coincidence that in distant times the most important churches were located in the heart of the historic city—within the so-called *dytynets* (citadel) or close to it. This is how the historical churches of Kyiv and Chernihiv were located—the Tithe (Desiatynna) Church, the St. Sophia Monastery, St. Michael's Golden-Domed Monastery in Kyiv, the Cathedral of the Transfiguration and Saint Boris and Hlib in Chernihiv. In both cases, the special location of the most important churches was emphasized by the terrain, as the *dytynets* (citadel) was located on the upper points of the high bank of the river.

The general characteristics of historical church buildings were as follows. Wooden and brick churches were built in Kyiv, Chernihiv, Ovruch, and Halych. Wooden churches were log buildings and had much in common with the construction of dwellings, but borrowed from the Byzantine tradition of masonry construction led to the emergence of a variety of planning solutions: towerless churches and chapels, four-pillar one-nave churches, six-pillar—seven-nine-thirteen-nave churches.

The structure of the period of Kyivan Rus is divided into three periods:

- 1) Between the second half of the tenth century and the mid-eleventh century—the period of maximum prosperity of the princely state and the centralization of power after the baptism of Kyivan Rus, drawing on the experience of brick masonry construction from Byzantium, which allowed for large-scale church construction. The following churches belong to this period: the Tithe (Desiatynna) Church, the St. Sophia Cathedral, St. George's Church, St. Irina's Church in Kyiv, and the Transfiguration Cathedral in Chernihiv. These were large-scale buildings of pyramidal composition. They were mixed-use buildings, i.e., they featured a combination of church and secular (government) functions. A typical scheme of a church of the first period is a three- or five-nave multi-pillar multi-domed cross-domed church surrounded by galleries, smaller domes on the facade rise pyramidally to a main dome.
- 2) The second half of the eleventh century—the 1130s—the period of the beginning of strife between the heirs of Prince Yaroslav the Wise, the struggle for the throne of Kyiv and the beginning of the decline of the state, reducing the scale and number of churches. This period includes: St. Cyril's Church, the Assumption Cathedral of the Kyiv-Pechersk Lavra, St. Michael's Golden-Domed Ca-

thedral in Kyiv, as well as the Cathedral of St. Boris and Hlib and the Assumption Cathedral of Yelets'kyi Monastery in Chernihiv. A typical scheme of the church of the second period is a six-pillar three-nave single-nave cross-domed church.

- 3) The second half of the twelfth century—1240—saw the final decline of the state due to strife, and resulted in small-scale churches. The period was interrupted by the Tatar-Mongol invasion. A small number of churches belong to this period: St. Basil's Church in Ovruch, the Church of St. Panteleimon in Halych, the Piatnytska (St. Parasceve's) Church in Chernihiv. The most common type of church of the third period was a four-column one-nave cross-domed church with emphasized verticality of the composition.

The facade composition of nine churches was analyzed—three for each period of Kyivan Rus.

Graphic analysis of proportional structure clearly proves the change in the type of composition, which is emphasized by changing the angle at the top, if one conditionally fit the main facade into a triangle. In the first period the angle at the top was 81–86°, i.e., was as close as possible to the right angle, in the second period the angle at the top was 70–73°, in the third period the angle at the top was 51–69°, which accordingly affected the visual perception of the image of the church—first a more low-lying one, spread out on the ground, with a larger plan area, gradually becoming more slender, elongated upwards, with a smaller plan area.

The image of the Christian church of the Baroque period and the transformation of its composition from the early to the late period

The time period, which in literature is often called the period of the Ukrainian Baroque, covers the second half of the seventeenth century—the years 1770–1780—when it was gradually replaced by Classical Revival, forcibly planted by the Russian Empire, which seized the Right and Left banks of Ukraine. In this study, I will not discuss the debatability of the Baroque term in relation to the characteristics of the relevant buildings in Ukraine. The problem is that researchers have not yet agreed on whether it is appropriate to characterize as Baroque those buildings that do not actually have the features of Western European Catholic Baroque, but have much in common with the features of Ukrainian wooden church architecture. This issue was raised in particular by Y. Ivashko and O. Chobitko [2016] because some Ukrainian scholars (M. Makarenko) considered it more appropriate to use the term “second Ukrainian Renaissance.” The authors of the guide *Orthodox Poltava Region* also cited several academic versions of this style—the Ukrainian Baroque (I. Hrabar, H. Pavluts'kyi, H. Lohvyn), and the national (Ukrainian) architectural style [Shumyts'kyi and Tsapenko 2008]. However, in this case there is a problem of the stylistic definition of those buildings that really have the features of Western European Baroque, because they

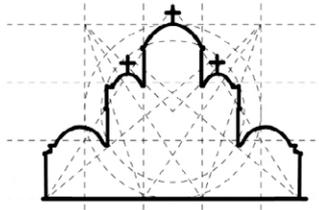
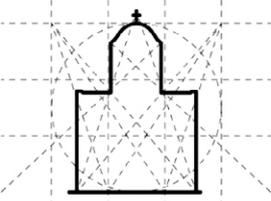
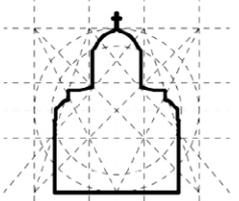
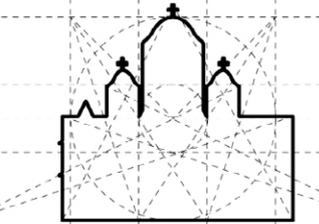
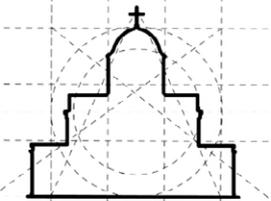
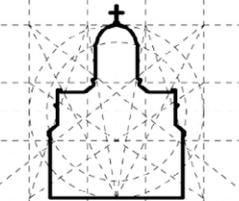
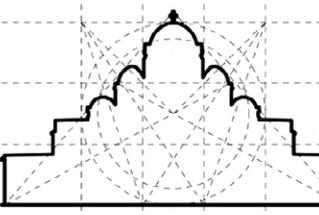
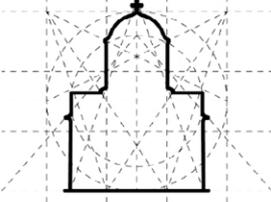
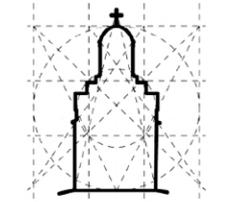
1st period the second half of 10th century - the middle of the 11th century	2nd period the second half of 11th century - 1130s	3rd period the second half of 12th century - 1240
		
Tithe (Desiatynna) Church (989 - 996)	Assumption Cathedral of Kyiv-Pechersk Lavra (1073 - 1078)	St. Basil's Church in Ovruch (1190)
		
St. Irina's Church (1030 - 1037)	St. Borys' and St. Hlib's Cathedral in Chernihiv (1120 - 1123)	Church of St. Panteleimon in Halych (1194)
		
St. Sophia Cathedral (1037 - 1040)	St. Cyril's Church (1139)	Piatnytska (St. Parasceve's) Church in Chernihiv (end of XII - early XIII cent.)

Fig. 1. Proportional structure of the churches of Kyivan Rus; by A. Urakina.
Ryc. 1. Struktura proporcji cerkwi Rusi Kijowskiej; oprac. A. Urakina.

were built by European architects (the Mhar Monastery Cathedral, the Trinity Cathedral in Chernihiv and St. Andrew's Church in Kyiv).

Here are some well-known quotes about the duality of the stylistic nature of masonry architecture by S. Bezsonov:

"[...] in all the rather numerous restoration works of the compositions of the Kyiv churches by Petro Mohyla—St. Sophia of Kyiv, Assumption Cathedral of the Pechersk Monastery, the churches of St. Michael's and Vydubtskyi monasteries, one can see the restraint and balance of the Renaissance and Baroque décor. In those buildings that were built almost anew, such as the church on the ruins of the Tithe (Desiatynna) Church or the Church of the Savior in Berestov, we have solutions in the spirit of Ukrainian national architecture [...] Awakened in the seventeenth century in Ukraine, interest in the historical and artistic past was vividly expressed in the development of architec-

ture in the second half of the century. [...] This architectural trend was accompanied by a second—the creation of large cathedral five-headed six-column, domed churches, the origins of which go from the ancient Russian six-column and medieval churches with towers. These buildings have nothing in common with Western European basilicas in their plans, general composition, and organization of the interior, and the decorative molding covering their walls contains elements of folk art in combination with Russian and Western Ukrainian art. [...] Only in the end of the seventeenth century one could observe the appearance of decorative Baroque forms on historically constructed Kyiv buildings, such as the dome of St. Michael's Golden-Domed Monastery. The new type of brick church sought to reproduce the types of tiered three- and five-domed churches formed in wood in Ukraine [...] These churches do not express Baroque ecstasy, impulse, exceptional dynamism, they do not achieve the play of light and shadow by placing and breaking decorative forms. Thus,

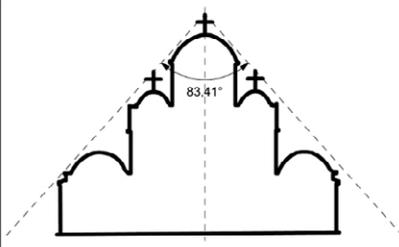
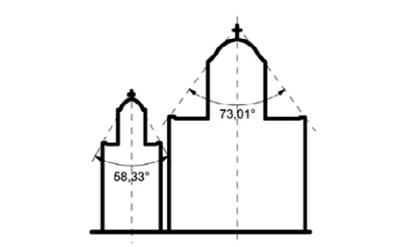
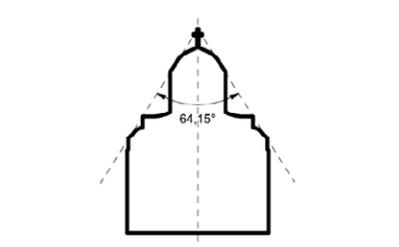
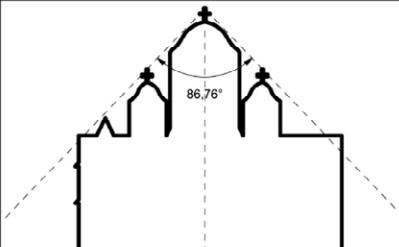
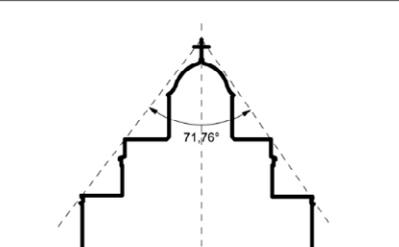
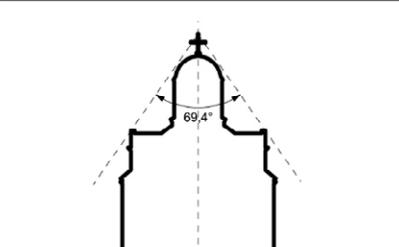
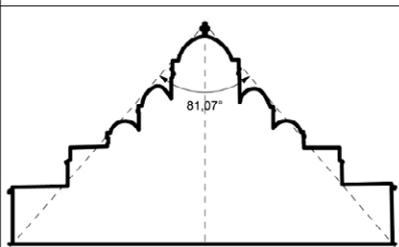
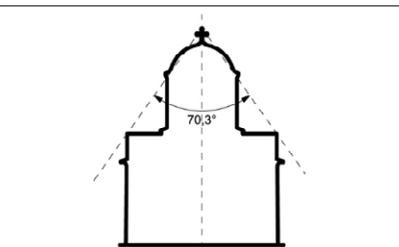
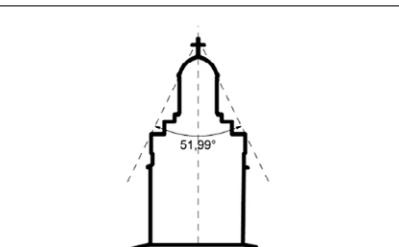
1st period the second half of 10th century - the middle of the 11th century	2nd period the second half of 11th century - 1130s	3rd period the second half of 12th century - 1240
80 - 87°	70 - 73°	51 - 69°
		
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Fig. 2. Compositional structure of the churches of Kyivan Rus relative to the angle at the top; by A. Urakina.
Ryc. 2. Struktura kompozycyjna cerkwi Rusi Kijowskiej pod względem kąta w szczycie budynku; oprac. A. Urakina.

there is no basis—neither historical nor stylistic—for the assertion that in the seventeenth century in Ukraine there was a spread of the Baroque style, brought as if to Kyiv from Western Europe.” [Bezsonov 2015]

Emphasizing a certain inconsistency of the European Baroque and Cossack Baroque due to the influence of the latter on both ancient and folk traditions, S. Bezsonov emphasized the reverse process of the influence of brick construction on wood, noting: “these compositional principles and reworked decorative forms, from wooden architecture, being transferred to stone, vary once again, and with the development and spread of the latter back have their impact on wood” [Bezsonov 2015].

I have deliberately cited several quotations from the scholar in detail in order to emphasize the unanimity of the assessment of the phenomenon called the Ukrainian Baroque and the need for additional research on

buildings (especially churches) of this period. In many respects S. Bezsonov’s views aligned with those of V. Vechersky [2001].

Since this discussion is beyond the scope of this study and the proposed term “second Ukrainian Renaissance” is also debatable, the common term “Ukrainian Baroque” or “Cossack Baroque” will be used hereinafter.

The Baroque period became the second significant period of Orthodox architecture in the history of not only Kyiv, but also of the Middle Dnipro region and the Left Bank, where the Cossacks spread. That is why the variety of style in these areas is also called “Cossack Baroque.”

Wooden and brick church construction was intensified in the territories of the Cossack administration, as the Cossacks considered themselves defenders of the Orthodox faith. These processes continued against the background of the construction of the new for-

dress cities Chyhyryn, Baturyn, Hlukhiv, streamlining the urban development system and the spread of brick construction—town halls, regimental offices, as well as educational institutions, shops and printing houses.

Three periods of Ukrainian Baroque are most often distinguished:

- 1) Early (1648–1680)—the transition period from the Renaissance to the Baroque, the period of non-formation of the main features of the style, when it was possible to combine in one buildings features of the Renaissance and Baroque. The following churches belong to this period: the church in Subotiv, the Cathedral of St. Nicholas in Nizhyn, the Holy Trinity Cathedral in Chernihiv (the boundary of the Early and High Baroque), the cathedral of the Mhar Monastery, Hustyn Monastery;
- 2) High (1680–1740)—the period of the maximum expression of the style's elements. The following churches belong to this period: St. George's Cathedral of the Vydubetskyi Monastery, the All Saints Church above the Economic Gate, the Great Bell Tower of the Kyiv-Pechersk Lavra, the Bell Tower of St. Sophia Cathedral—in Kyiv, the Church of St. Catherine in Chernihiv, the church in Sokyrntsi, St. George's Cathedral in Lviv, the Pochaiv Lavra Cathedral;
- 3) Late (between the 1740s and the late 1770s)—a period of gradual reduction of Baroque features and its displacement by Classicism. The following churches belong to this period: the Cathedral of the Nativity of the Virgin in Kozelets, the Intercession Church in Podil, the bell tower in the Far Caves of the Lavra.

Y. Ivashko conditionally distinguished two large Baroque schools: the Western School (Lviv, Pochaiv) and the Central–Eastern School (Right-Bank Dnipro region and Left Bank), respectively, further dividing the central–eastern school into regional schools—Kyiv, Chernihiv, Poltava, Slobozhanshchyna. Within each school one can distinguish the following churches and cathedrals (Ivashko 1997; Ivashko and Chobitko 2016):

The Western School (Lviv, Buchach, Pochaiv)—the Church of the Exaltation of the Cross in Buchach (1753–1770), the Church of the Intercession in Buchach (1764), the Town Hall in Buchach (1750–1751), the Cathedral of the Pochaiv Lavra (1771–1783), the Cathedral of St. George in Lviv (1744–1770);

The Central-Eastern School with regional schools in its structure:

Right-Bank-Dnipro-region—in Kyiv—the Epiphany Cathedral of the Bratskyi Monastery (1690–1701), St. George's Cathedral of the Vydubetskyi Monastery (1696–1701), Kovnir's buildings (the seventeenth and eighteenth centuries), the bell tower at the Near Caves (1759–1762), the bell tower at the Far Caves of the Kyiv-Pechersk Lavra (1754–1761), Military—St. Nicholas Cathedral (1690–1702), etc.;

The Chernihiv School (Chernihiv, Sedniv, Kozelets, Novhorod-Siverskyi, Putivl, Baturyn, Hlukhiv, Gustyn)—St. Catherine's Church in Chernihiv (1715),

Assumption Cathedral of the Yeletskyi Monastery (between the late eleventh century and the early twelfth century, 1671–1679), St. Nicholas Cathedral in Nizhyn (1658), the Cathedral of the Nativity of the Virgin in Kozelets (1753–1763), the Church in Hlukhiv (1693), the Transfiguration Cathedral in Hlukhiv (1765), the Cathedral of the Hustyn Monastery (1672–1676);

Poltava School (Pereiaslav, Poltava, Velyki Sorochyntsi)—Exaltation of the Cross Cathedral in Poltava (1699–1709), Transfiguration Cathedral of the Mgar Monastery (1684–1692), the Church of Transfiguration in Velyki Sorochyntsi (1732);

Slobozhanshchyna School (Sumy, Kharkiv, Okhtyrka, Izium)—Intercession Cathedral in Kharkiv (1689), Assumption Cathedral in Kharkiv (1771–1777), Transfiguration Cathedral in Izium (1684), Resurrection Church in Sumy (1702), Intercession Cathedral in Okhtyrka (1753–1762).

Y. Ivashko gave the following characteristics of each Baroque period [Ivashko 1997; Ivashko and Chobitko 2016]: Early Baroque: unformed signs of style, features of the Renaissance; High Baroque: the blooming of the style's elements, pear-shaped domes with interception—“kovnir;” Late Baroque: the domes become semicircular without interceptions, the symmetry of the composition, the décor disappears, restraint, rusticated lower level.

In contrast to the Kyivan Rus period, which was marked by a certain uniformity of composition and planning structure of churches, the Baroque period was characterized by a much larger number of churches and much greater variety. It was during the Baroque period that the composition of churches varied from three-part one-domed to nine-part nine-domed.

According to the same principle as the composition of churches of the Kyivan Rus period was analyzed, it is possible to analyze selected characteristic buildings of the Central–Eastern School from each Baroque period. In the period of the Early Baroque in such buildings the angle at the top was 81–108°, in the period of High Baroque it was 59–100°, in the period of Late Baroque it was 49–80° (Fig. 4). Thus, from the first to the third period of the Baroque, the angle at the top decreased twofold in some cases.

Certain conclusions can be drawn by comparing the angles at the top of Kyivan Rus and Baroque churches. In the Kyivan Rus churches there was a tendency to replace the rather horizontal composition with a more compact one, with vertical development. If one places a Kyivan Rus church in a triangle, in most cases, the tangents of the triangle directly pass through the extreme points of the roof over the walls and crosses. Other conclusions can be obtained by analyzing the placement of a Baroque church inside a virtual triangle. As a rule, the church becomes much narrower in terms of the ratio of the side in plan and height, because the tangent sides of the triangle no longer cross the extreme points of the roof over the walls and pass through the crosses. That is, the church easily interferes with the inner

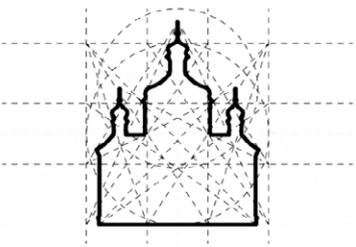
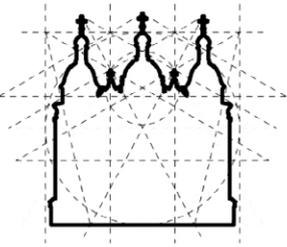
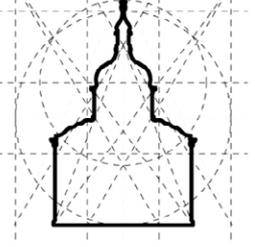
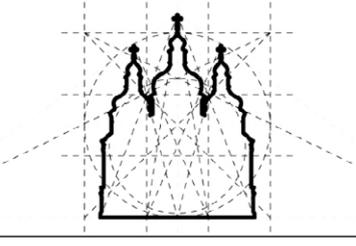
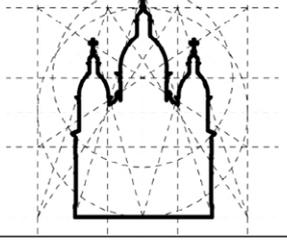
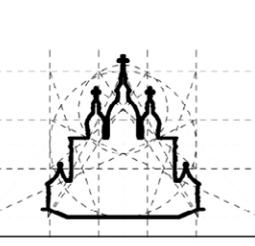
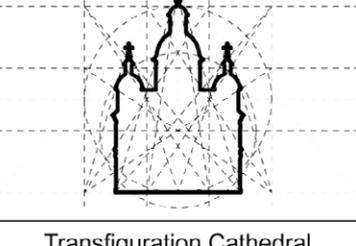
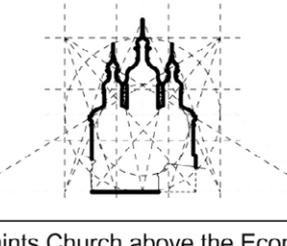
1st period Early Ukrainian Baroque (1648-1680)	2nd period High Ukrainian Baroque (1680-1740)	3rd period Late Ukrainian Baroque (1740s - end of the 1770s)
		
Intercession Church in the village of Sulymivka (1652 - 1659)	Military-St. Nicholas' Cathedral (1690 - 1693)	Church of Saints Peter and Paul in Podil (1744 - 1750)
		
St. Nicholas' Cathedral in Nizhyn (1655 - 1658)	Epiphany Church of the Bratskyi Monastery (1690 - 1693)	Cathedral of the Nativity of the Virgin in Kozelets (1752 - 1763)
		
Transfiguration Cathedral of the Mhar Monastery (1682 - 1754)	All Saints Church above the Economic Gate of the Lavra (1696 - 1698)	

Fig. 3. Proportional structure of Baroque churches; by A. Urakina.
Ryc. 3. Struktura proporcji kościołów barokowych; oprac. A. Urakina.

field of such a triangle. It is notable that this technique was used in churches on a three-nave basilica plan, derived from the Kyivan Rus plan (Cathedral of the Mhar Monastery, the Epiphany Church of the Bratskyi Monastery), and in churches with a plan based on the isosceles Greek cross (St. Nicholas Cathedral in Nizhyn, the Nativity of the Virgin Cathedral in Kozelets), which spread in Ukraine in the Baroque era.

The authors of the guide "Orthodox Poltava Region" highlighted such features of the churches of the Poltava school as a gradual increase from early to high period almost twice the height of brick churches, the vertical vector of composition, accent silhouette [Dmytrenko et al. 2008]. If we define the role of Kyiv in the process of transformation of the composition of the Christian (Orthodox) church from between the tenth and the eighteenth centuries, it should be noted that in Kyiv these processes corresponded to general trends. At the same time, if we compare the transformation of

the church composition in three Kyivan Rus and three Baroque periods, in the case of Kyivan Rus churches the process of a sharp change in the composition vector from pyramidal to vertical was more noticeable, while in the Baroque era we can see changing morphology emphasized slenderness of the domes, decoration, the number of domes in the late period, although mostly reduced to one (as in the late period of Kyivan Rus), but there were three-domed churches too.

This was largely due to the lack of a single fixed planning structure of churches in the Baroque period (as was the case in Kyivan Rus, where the cross-domed structure of the plan changed only the number of naves, domes, pillars, but retained the basic planning scheme). And if some regional Baroque schools demonstrated the predominance of certain types of plan, the feature of the Right-Bank Dnipro region school was the lack of a dominant type of plan and the multiplicity of layers, as shown in the table in figure 6.

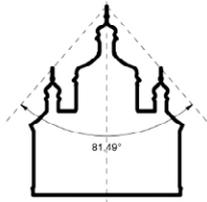
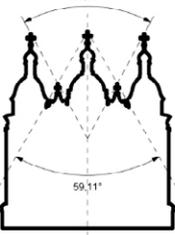
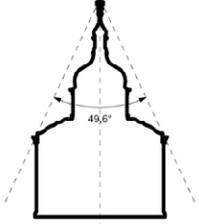
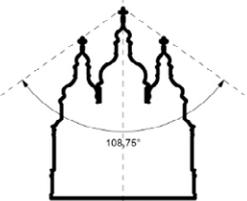
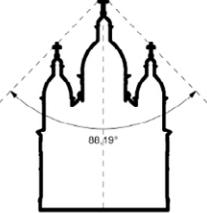
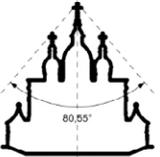
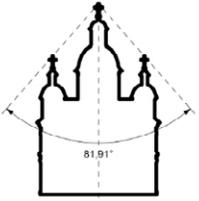
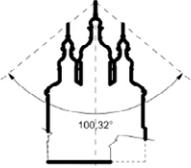
1st period Early Ukrainian Baroque (1648-1680)	2nd period High Ukrainian Baroque (1680-1740)	3rd period Late Ukrainian Baroque (1740s - end of the 1770s)
81 - 108°	59 - 100°	49 - 80°
		
Intercession Church in the village of Sulymivka (1652 - 1659)	Military-St. Nicholas' Cathedral (1690 - 1693)	Church of Saints Peter and Paul in Podil (1744 - 1750)
		
St. Nicholas' Cathedral in Nizhyn (1655 - 1658)	Epiphany Church of the Bratskyi Monastery (1690 - 1693)	Cathedral of the Nativity of the Virgin in Kozelets (1752 - 1763)
		
Transfiguration Cathedral of the Mhar Monastery (1682 - 1754)	All Saints Church above the Economic Gate of the Lavra (1696 - 1698)	

Fig. 4. Compositional structure of Baroque churches relative to the angle at the top; by A. Urakina.
Ryc. 4. Struktura kompozycyjna kościołów barokowych względem kąta w szczycie budowli; oprac. A. Urakina.

Conclusions

A comparative analysis of the churches of the three periods of Kyivan Rus showed that the main changes in the visual perception of churches were primarily due to changes in proportions (the length of the plan to total height) and changes in the angle at the top of the main dome. It was graphically demonstrated that the angle at the top of 81–86°, i.e., as close as possible to a right angle, gives the impression of a monumental, predominantly horizontal, low-lying church, although it allows one to arrange many domes located pyramidally. The church becomes as slender as possible with an angle of 51° at the top, as in St. Parasceve's (Piatnytska) Church in Chernihiv, but at the same time it causes a small size in plan and one dome. The analysis of the compositional construction of Orthodox churches of the Ukrainian Baroque period in the Middle Dnipro

region and the Left Bank proved the greater development of the composition vertically in all three periods (in contrast to similar processes in Kyivan Rus).

Thus, the findings can be used in the reconstruction of partially or completely destroyed churches of the Baroque period, if they do not have exhaustive survey documentation. The impression of a greater slenderness of the churches of the Baroque period is explained by the fact that they are much narrower on the tangent sides of the virtual triangle. If this principle is not upheld, the tops of reconstructed churches may appear visually shorter and disproportionately lower in relation to the height of the walls. Such proportions in historic Baroque churches were not chosen by chance: the tops were developed upwards and multi-tiered also because they should not give the impression of low-lying, given the promising cuts, in addition, the western facades of churches are

	Three-part churches	Cross-shaped churches	Three-nave churches	Almost square churches	Tetraconches	Mixed-type churches with outbuildings
Chernihiv Ukrainian Baroque School	Early (1648-1680)					
	High (1680-1740)					
	Late (1740s - end of the 1770s)					

Fig. 5. Types of plans of Baroque churches of Chernihiv School; by Y. Ivashko.
Ryc. 5. Rodzaje rzutów kościołów barokowych szkoły czernihowskiej; oprac. J. Iwaszko.

	Three-part churches	Cross-shaped churches	Three-nave churches	Mixed-type churches with outbuildings
Right-Bank-Dnipro-region Ukrainian Baroque School	Early (1648-1680)			
	High (1680-1740)			
	Late (1740s - end of the 1770s)			

Fig. 6. Types of plans of Baroque churches of the Right-Bank Dnipro region school; by Y. Ivashko.
Ryc. 6. Rodzaje rzutów kościołów barokowych szkoły prawobrzeżnego regionu Dniepru; oprac. J. Iwaszko.



Fig. 7. Assumption Cathedral in Poltava after reconstruction; photo from the collection of A. Urakina, 2016.

Ryc. 7. Katedra Wniebowzięcia Maryi Panny w Poltawie po odbudowie; fot. ze zbiorów A. Urakiny, 2016.

traditionally crowned with did not have to completely cover the domes.

An example of how non-compliance with these principles can change the impression of the Baroque church is the rebuilt Assumption Cathedral in Poltava, where during the reconstruction the height of the tops relative to the state before the demolition was not maintained, which gives the impression of their mismatch.

The Assumption Cathedral in Poltava was the main church of the Poltava Fortress (the previous church was traditionally wooden) and was built during the High-Late Baroque, which influenced the combination of Baroque and early Classicism, which

is especially noticeable in the authentic bell tower. Originally, the cathedral was 32 m long and 17 m wide. After the redevelopment carried out in 1780, the cathedral received two additional domes, rebuilt the sacristy and the sexton's room. At the end of the nineteenth century, the area of the cathedral was further increased by 170 m² due to the addition of a vestibule and the installation of two domes and an arch over the main entrance.

The cathedral was destroyed in 1934 and rebuilt in 2000–2004. The current height of the cathedral is 37.5 m, while the original design envisaged a height of 44.07 m [Dmytrenko et al. 2008].

The problem is that back in the nineteenth century, several stages of increasing the area of the cathedral by completing the premises, changing the pear-shaped domes to semicircular ones actually changed the original traditional composition of the Ukrainian Baroque, mentioned above, as the vertical vector was reduced to a horizontal one. The same mistake was made during the reconstruction of the cathedral, because in its modern form the array of walls looks inconsistent with the scale of the domes with the general conformity of the stylistic solution to the historical model. This proves the importance of following the general principles of compositional construction, aspects of which were analyzed in this study, which in many cases become even more important for creating a visual image of the temple than maintaining stylistic conformity in the outlines of domes, pediments or décor.

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Abstract

This paper presents an analysis of the process of transformation of the architectural image of the Orthodox churches of Ukraine from between the tenth to the end of the eighteenth centuries. The changes in the massing composition of churches in different periods of Kyivan Rus, and later in different periods of the Ukrainian Baroque were analyzed. The main aspects of the main changes that most strongly influenced the perception of the architectural image of the church were graphically identified. Through the prism of theoretical analysis of facades, the real experience of reconstruction of destroyed Kyiv churches, which were of great importance to all of Eastern Orthodoxy—St. Michael's Golden-Domed Cathedral and Assumption Cathedral of the Kyiv-Pechersk Lavra—can be analyzed.

Streszczenie

Artykuł przedstawia analizę procesu przemian architektonicznego wizerunku cerkwi ukraińskich wybudowanych między X a XVIII wiekiem. Przeanalizowano zmiany w kompozycji brył kościołów z różnych okresów Rusi Kijowskiej oraz różnych okresów ukraińskich. Graficznie zidentyfikowano główne zmiany, które najbardziej wpłynęły na odbiór wizerunku architektonicznego cerkwi. Przez pryzmat analizy teoretycznej elewacji umożliwiono prześledzenie faktycznych doświadczeń z odbudowy zniszczonych kijowskich cerkwi, które miały ogromne znaczenia dla całości Kościoła Wschodniego – Monasteru św. Michała Archanioła o Złotych Kopułach oraz soboru katedralnego Zaśnięcia Matki Bożej Ławry Peczerskiej.