

## Directions of the Old Rus Church Architecture Development of the 12<sup>th</sup> – the first third of the 13<sup>th</sup> century

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**Abstract:** *The article analyzes the process of development in the architecture of Old Rus on the basis of transplanted elements of the Byzantine cathedral construction of its own tradition, which is vividly embodied in the original forms of arch-gabled and pillar-shaped churches. The formation of the arch-gabled church took place in the second half of the 11<sup>th</sup> century in Kyiv, where in the early 12<sup>th</sup> century, it acquired finally completed forms. Almost simultaneously in Chernihiv and Novgorod in the first quarter of the 12<sup>th</sup> century, and later in other cultural centers, there appeared regional variants of arch-gabled church, of which the Chernihiv variant quickly became interregional, spreading in the south-western regions of Rus. The first signs of pillar compositions are recorded in the first decade of the 12<sup>th</sup> century also in Kyiv within the newly formed arch-gabled cathedral. In the middle of the 12<sup>th</sup> century in Polotsk there existed already a purposeful search for an aesthetic model of a pillar-shaped church, which in the 80's of the 12<sup>th</sup> century moved to Smolensk. The crystallization of the completed forms of the vertically oriented composition occurred at the end of the 12<sup>th</sup> century, after which the pillar-shaped church took over the role of interregional type, displacing the arch-gabled cathedral, apparently completely until 1240, when the development of Old Rus architecture was interrupted by the Mongol invasion.*

**Keywords:** Middle Ages; Old Rus; architecture, composition; arch-gabled church; pillar-shaped church.

The beginning of church building tradition in Kyivan Rus, according to the chronicle, is associated with Byzantine masters invited by Prince Volodymyr the Great to build the first brick church in Kyiv – the Tithe (Desiatynna) Church (989–996). The church was almost completely destroyed by hordes of Batu Khan in 1240 and is now known from archeological materials. But in the 11<sup>th</sup> century on the basis of transplanted Byzantine forms, the construction of churches began in Kyiv and other cultural centers of Kyivan Rus, which entered the treasury of world

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architecture not as a provincial branch of Byzantine architecture, but as an independent Kyivan Rus architectural school. In the 1980s, A. Komech first identified a set of characteristics that, against the background of the Byzantine tradition substrate, determined the originality of Kyiv architecture. It is a multi-dome in the churches of the first stage (the end of the 10<sup>th</sup> – the first half of the 11<sup>th</sup> century), which A. Komech explained functionally connecting with the need to illuminate the vast choir, the construction of which was a requirement of the prince's order. The second stage of architectural development, which began with the construction of the Dormition Cathedral of Pechersk Monastery, A. Komech defined as the period of origin of own original tradition, marked by the formation of a previously unknown arch-gabled (*закомарний* in Ukrainian) church<sup>1</sup>. However, the study of A. Komech ends at the beginning of the 12<sup>th</sup> century, and the church continued to develop throughout the 12<sup>th</sup> century, the details of which remain unexplored. In addition, at the end of the 12<sup>th</sup> century a pillar-shaped (*стовпоподібний* in Ukrainian) church, a completely new three-dimensional type, became widespread in Old Rus. The first information about such churches appears in the process of architectural and archeological research of the 1920s up to 1950s by P. Baranovsky, N. Brunov, N. Voronin, and I. Khozerov<sup>2</sup>. This type of churches was studied in detail by Yu. Asieiev (early 1970s)<sup>3</sup>. But he considered only the churches of the southern regions, so his typology of pillar-shaped churches is local. In addition, Yu. Asieiev analyzed the monuments only of the end of the 12<sup>th</sup> – first third of the 13<sup>th</sup> century without analyzing the stages of such churches formation. At the same period P. Rappoport outlined a broader picture of architecture development in

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<sup>1</sup> А. И. Комеч, *Древнерусское зодчество конца X – начала XII в. Византийское наследие и становление самостоятельной традиции*, Наука, Москва, 1987.

<sup>2</sup> П. Барановский, *Собор Пятницкого монастыря в Чернигове* in the edition *Памятники искусства, разрушенные немецкими захватчиками в СССР*, Изд-во Акад. наук СССР, Москва; Ленинград, 1948, с. 13–34. Н. И. Брунов, *Извлечение из предварительного отчета о командировке в Полоцк, Витебск и Смоленск в сентябре 1923 года*, Рос. ассоциация научно-исследовательских институтов общественных наук, Москва, 1926. Н. И. Брунов, *К вопросу о самостоятельных чертах русской архитектуры X–XII вв.* in the edition *Русская архитектура. Доклады, прочитанные в связи с декадником по русской архитектуре в Москве в апреле 1939 г.*, Гос. архитектур. изд-во Акад. архитектуры СССР, Москва, 1940, с. 106–126. Н. Н. Воронин, “У истоков русского национального зодчества” in “Архитектура СССР”, 5/1944, с. 32–37. Н. Н. Воронин, “Слово о полку Игореве” и русское искусство XII–XIII вв. in the edition *Слово о полку Игореве*, Изд-во Акад. наук СССР, Москва; Ленинград, 1950, с. 320–351. Н. Н. Воронин, *У истоков русского национального зодчества (Из истории зодчества периода феодальной раздробленности XI–XV вв.)* in the edition *Ежегодник института истории искусств 1952. Живопись. Архитектура*, Изд-во Акад. наук СССР, Москва, 1952, с. 257–316. И. М. Хозеров, *К исследованию конструкции Спасского храма в Полоцке*, Смоленск, 1928.

<sup>3</sup> Ю. С. Асеев, *Зодчество Приднепровской Руси конца XII – первой половины XIII веков*: автореф. дис. на соиск. уч. степ. доктора архитектуры, Москва, 1971.

the late 12<sup>th</sup> – first third of the 13<sup>th</sup> century in its connection with the previous stages of development<sup>4</sup>. But as a holistic process of pillar-shaped churches formation and development remains unexplored, the history of the arch-gabled church in the 12<sup>th</sup> century also remains poorly researched.

Arch-gabled church, which is one of the first innovations of the Old Rus architectural tradition according to A. Komech, takes finally completed forms in the early 12<sup>th</sup> century<sup>5</sup>. All divided parts of the wall facades of such churches are completed by semicircular arched gables (*закомара* in Ukrainian), some of which are constructive (fill the ends of the vaults), and some of the arched gables are decorative (adjoin to the slopes of the vaults). The earliest Old Rus church that has preserved the original facade completion is the Transfiguration Cathedral in Chernihiv (founded before 1036). It represents a typical Byzantine combination of semicircular arched gables filling the ends of the arms of the spatial cross and horizontal cornices above other parts of the walls<sup>6</sup> (Fig. 1). In St. Sophia Cathedral (chronicles give two dates of its foundation: 1017 and 1037) semicircular arched gables are preserved in the ends of the arms of the transept of the five-naves core (the western arched gable is completely lost), and the shape of the corner part edges of the five-naves core under drum of the small domes are not clarified. None of the inner galleries has preserved either the ceilings or the facade walls of the second floor, because it is unknown what the original edges of the facade walls of Sophia of Kyiv looked like<sup>7</sup>. In St. Sophia Cathedral in Kyiv and the Transfiguration Cathedral in Chernihiv, the vaults above the eastern corner compartments were lowered relative to the vaults of the last compartments according to the Byzantine tradition and the wall edges of these compartments and the side apses were lowered accordingly too.

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<sup>4</sup> П. А. Раппопорт, *Русская архитектура на рубеже XII–XIII веков* in the edition *Древнерусское искусство: Проблемы и атрибуции*, Наука, Москва, 1977, с. 12–29.

<sup>5</sup> А. И. Комеч, *Древнерусское зодчество конца X – начала XII в. ...*, с. 283–285.

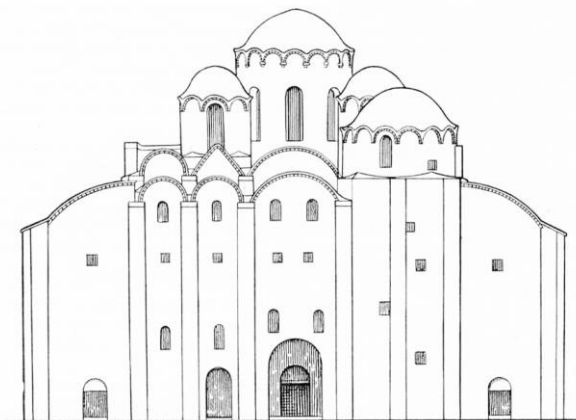
<sup>6</sup> Н. В. Холостенко, *Исследования Спасского собора в Чернигове* in the edition *Реставрация и исследования памятников культуры*, Вып. 3, Стройиздат, Москва, 1990, с. 8.

<sup>7</sup> The reconstructions of the original appearance of St. Sophia Cathedral in Kyiv, proposed at different times by different authors, give several options for ceilings the second floors of the inner galleries, which have a different way of the facade wall edges. See М. К. Капреп, *Древний Киев. Очерки по истории материальной культуры древнерусского города*. Т. II. Памятники киевского зодчества X–XIII вв. Изд-во АН СССР, Москва–Ленинград, 1961, с. 123–140; М. Й. Кресальний, *Софійський заповідник у Києві: архітектурно-історичний нарис*. Держ. вид-во літ. з буд. і архітектури УРСР, Київ, 1960, с. 85–86; Ю. С. Асеев, Тоцкая, И. Ф., Штендер, Г. М., *Новое о композиционном замысле Софийского собора в Киеве* in the edition *Древнерусское искусство: Художественная культура X – первой половины XIII вв.*, Наука, Москва, 1988, с. 18–27; Г. Н. Логвин, “Новые исследования древнерусской архитектуры” in “Строительство и архитектура”, 8/1978, с. 31–34.



**Fig. 1** Transfiguration Cathedral in Chernihiv: **a)** view from the west;  
**b)** reconstruction of the western façade

St. Sofia Cathedral in Novgorod (1045–1050/1052), which is a five-naves simple cross-domed church, surrounded by a series of two-story galleries in the west, south and north, is considered to be the initial stage in the arch-gabled church formation. First known in Old Rus arched gables over small divided parts of the facade walls and the first decorative arched gable which is unique and unknown in Byzantium among them have remained in this cathedral. But Sophia of Novgorod arch-gabled edges, according to A. Komech, had not been formed as “structural principle” yet as arched gables were combined with the Byzantine horizontal cornices in it, which complete the eastern compartments<sup>8</sup> (Fig. 2).



**Fig. 2** St. Sophia Cathedral in Novgorod, reconstruction of the western façade

The first already formed arch-gabled church, about which information is preserved, is the Dormition Cathedral of Pechersk Monastery

<sup>8</sup> А. И. Комеч, *Древнерусское зодчество конца X – начала XII в. ...* с. 248.

in Kyiv (1073–1087)<sup>9</sup>. The cathedral is four-pillared with a narthex (simple cross-domed type). Its main volume is an elongated west-east parallelepiped, topped by a single dome. All the corner compartments of the church are lowered (crowns of arched gables of these compartments are at the level of the springers of the large arched gabled of the arms of the spatial cross) on the reconstruction of the northern facade of the cathedral proposed by M. Kholostenko<sup>10</sup> (Fig. 3a,b). According to A. Komech, only the arched gables of the eastern corner compartments were lowered, which corresponds to the Byzantine tradition and the springers of small arched gables of the church western part were located on the same level with the springers of large arched gables<sup>11</sup> (Fig. 3c). On the walls of all the facades of the Dormition Cathedral (except the apses) there was a meander frieze relating to the floor level of the choir, and two tiers of windows above and below the meander emphasized the statics of the horizontal volume of the church. There were not galleries in the cathedral but there were the decorative niches at the bottom of the all its facade walls including the semicircles of the apses.

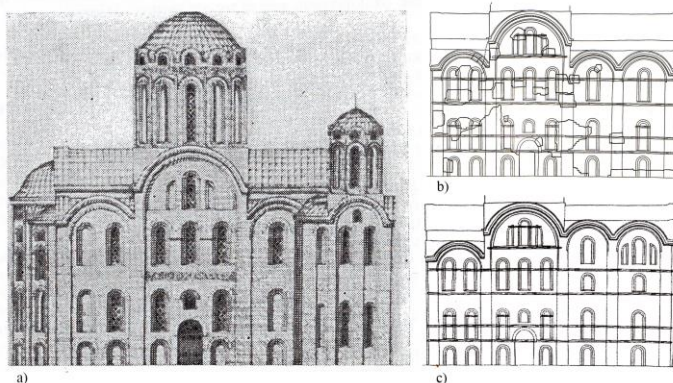


Fig. 3 a, b, c Domition Cathedral of Pechersk Monastery in Kyiv: **a)** reconstruction of the northern façade; **b)** scheme of the northern wall reconstruction; **c)** scheme of the northern wall reconstruction

<sup>9</sup> See М. В. Холостенко, *Успенський собор Печерського монастиря* in the edition *Стародавній Київ*, Наукова думка, Київ, 1975, с. 107–170. М. В. Холостенко, *Нові дослідження Іоанно-Предтеченської церкви та реконструкція Успенського собору Києво-Печерської лаври* in the edition *Археологічні дослідження стародавнього Києва*, Наукова думка, Київ, 1976, с. 131–165.

<sup>10</sup> М. В. Холостенко, *Успенський собор Печерського монастиря ...* с. 153., М. В. Холостенко, *Нові дослідження Іоанно-Предтеченської церкви та реконструкція Успенського собору Києво-Печерської лаври...* с. 144.

<sup>11</sup> А. І. Комеч, *Древнерусское зодчество конца X – начала XII в. ...* с. 272. Graphic reconstruction of the northern facade of the Dormition Cathedral of Pechersk Monastery, taking into account the remarks of A. Komech, was proposed by I. Anisimov. See I. О. Анісімов, *Деякі особливості первісної архітектури Успенського собору Києво-Печерської лаври (авторська версія)* in the edition *Лаврський альманах: Києво-Печерська лавра в контексті української історії та культури: зб. наук. праць*, Вип. 12, ВІПОЛ, Київ, 2004. с. 24.

St. Michael's Cathedral of the Vydubychi Monastery in Kyiv was built (1070–1088) almost simultaneously with the Dormition Cathedral of Pechersk Monastery. It was built in two stages, first the central core was erected, to which a narthex with a stair tower to the choir, located in the northern compartment of the narthex was later added<sup>12</sup>. The cathedral narthex with the stair tower have survived almost to their full height, and only the walls of the western compartments have survived from the central core. All facade divided parts of the cathedral narthex had arch-gabled edges, as evidenced by the remains of the lower parts of their windows or niches. According to A. Komech, the small divided parts of the walls of the cathedral original volume were also completed with arched gables, which were decorative, as the domed vaults were placed behind them (a fragment of one such vault has been preserved)<sup>13</sup>. According to N. Logvin's reconstruction, small divided parts of the facade walls of the main volume were to be crowned with a horizontal cornice<sup>14</sup>.

St. Michael's Golden-Domed Cathedral<sup>15</sup> and at the same time Pechersk Monastery Trinity Gate Church in Kyiv built in the early 12<sup>th</sup> century demonstrate the already formed arch-gabled edges of the facades. But the three-dimensional solution of these churches is fundamentally different. St. Michael's Golden-Domed Cathedral, as well as the Dormition Cathedral of Pechersk Monastery, is a four-pillared church with a narthex. Its volume is the same elongated parallelepiped, the statics of which are emphasized by a meander frieze and horizontal tiers of windows and decorative niches, including a number of basement niches (Fig. 4). The vaults of the eastern compartments of St. Michael's Golden-Domed Cathedral were lowered, as in the Dormition Cathedral, but no lowering was not visible on the facades, as there were decorative arched gables superimposed above them, springers of which were at the same level as all the other arched gables<sup>16</sup>.

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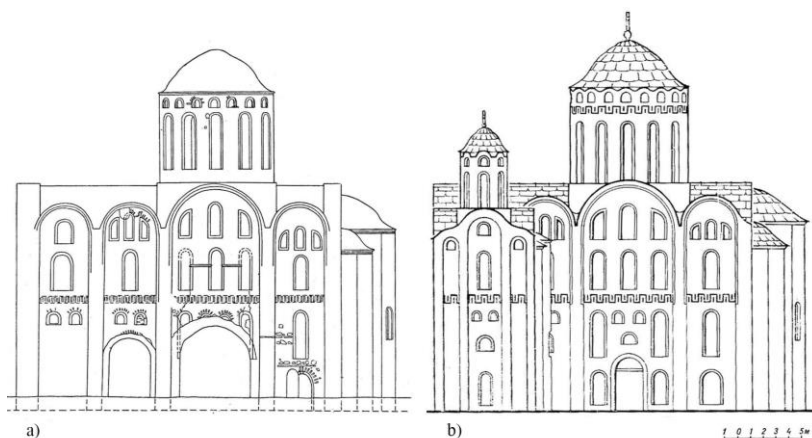
<sup>12</sup> Р. Бикова, *Видубицький монастир* in the edition *3 історії української реставрації: Додаток до щорічника «Архітектурна спадщина України»*, Українознавство, Київ, 1996, с. 179. І. І. Мовчан, *Археологічні дослідження на Видубичах* in the edition *Стародавній Київ*, Наукова думка, Київ, 1975, с. 100–102.

<sup>13</sup> А. И. Комеч, *Древнерусское зодчество конца X – начала XII в. ...* с. 265–266.

<sup>14</sup> Н. Г. Логвин, “Михайловская церковь на Выдубичах в Киеве” in “Советская археология”, 4/1986, с. 270.

<sup>15</sup> St. Michael's Golden-Domed Cathedral was demolished in 1937, its measurements were made by I. Morgilevsky in 1934. See М. К. Каргер, *Древний Киев. Очерки по истории материальной культуры древнерусского города. Т. II. Памятники киевского зодчества X–XIII вв.*, Изд-во АН СССР, Москва, Ленинград, 1961, с. 277, 279.

<sup>16</sup> Ю. С. Асеев, *Архитектура древнего Киева*. Будівельник, Киев, 1982, с. 100., А. И. Комеч, *Древнерусское зодчество конца X – начала XII в. ...* с. 280.



**Fig. 4** St. Michael's Golden-Domed Cathedral in Kyiv: **a)** drawing of the southern façade; **b)** reconstruction of the southern façade

Trinity Gate Church is a small four-pillared church without a narthex. All its façades are the same, including the eastern one, as the apses are sunk into the wall. The church is built above the gate, so its total volume has a vertical orientation, which is emphasized by the compositional symmetry of all façades, located in the center of the dome, as well as tiers of windows and niches, which in the absence of horizontal breaking up is perceived as filling vertical gaps between the lesenes (Fig. 5).



**Fig. 5** Trinity Gate Church of Pechersk Monastery in Kyiv: **a)** view from the south; **b)** reconstruction



Like all churches built in the 11<sup>th</sup> century, St. Michael's Golden-Domed Cathedral and Trinity Gate Church were built in a mixed technique "opus mixtum" of stone and brick with a recessed row. But at the beginning of the 12<sup>th</sup> century in the Church of the Savior in Berestov, built near Pechersk Monastery, there is a new type of masonry only from the brick, laid with a recessed row ("recessed-brick technique"), although the foundations and basement of its walls are made in the technique "opus mixtum", in some places this technique is found in the walls of the stair tower at the level of the choir<sup>17</sup>. Another feature of the construction technique of this church is the widespread use of oak beams for jumpers of door and window openings. There is no chronicle date of the Church of the Savior construction, the proposed dates vary from the end of the 11<sup>th</sup> – first quarter of the 12<sup>th</sup> century, but most often this church is associated with the period of Kyiv reign of Volodymyr Monomakh (1113–1125). Only the narthex to the floor level of the choir has survived from the original building of the Church of the Savior in Berestov (Fig. 6a), and its full plan is known from archeological excavations. This church has four pillars with a narthex (a simple cross-domed type), like the Dormition Cathedral of Pechersk Monastery and St. Michael's Golden-Domed Cathedral. The lateral divisions of the narthex are wider than the four-pillared core and form square projections, which is not found in other churches of Old Rus. In the northern division of the narthex there was a chapel with three apses recessed in the thickness of the eastern wall, and the southern division was occupied by a stair tower square outside and round inside in the center with a round support pillar. There were antechurches near the western, southern and northern entrances. The choir of the church was located at a height of more than 10 m, which exceeds the level of location of the choir of all well-known Kyiv churches (there are analogies only in the churches of Novgorod). Based on the level of the choir, the height of the church walls should reach 20 m (the choir was traditionally located at the level of the middle of the walls<sup>18</sup>). Thus, the height of the Church of the Savior in Berestov in relation to the size of the plan, compared to Kyiv churches of the previous period, was significantly higher, so its volume was vertically oriented, and the antechurches gave it some pyramidity (Fig. 6b). In the central part of the western facade and on the northern end of the narthex wall (the wall of the chapel) horizontal decorative divisions in the form of meander friezes corresponding to the level of the choir have been preserved. However, the windows and niches below the meander are arranged in vertical tiers, which emphasized the vertical

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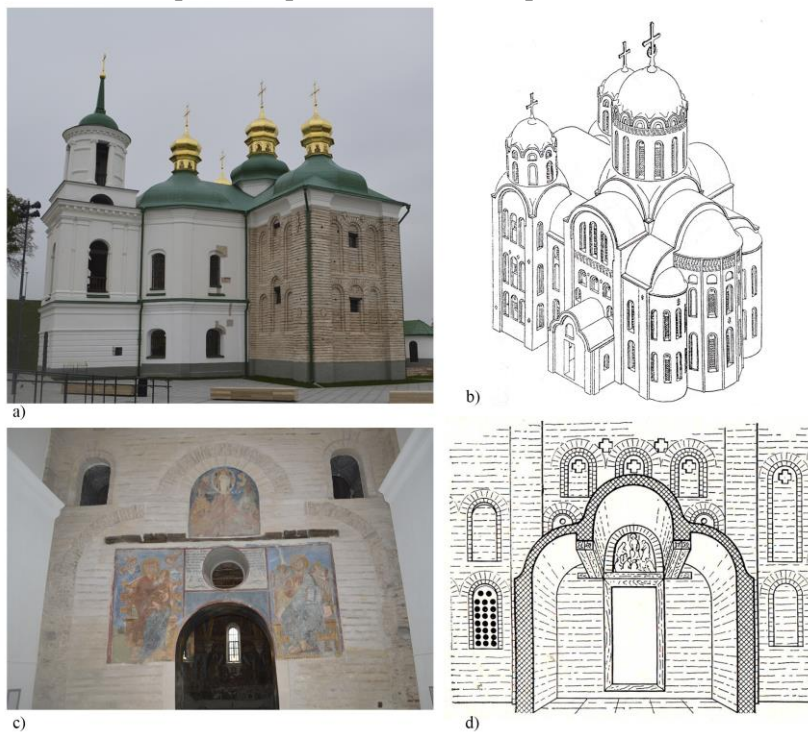
<sup>17</sup> О. Сердюк, Р. Гуцуляк, Ю. Коренюк, С. Скляр, *Науково-реставраційні дослідження та виконання невідкладних консерваційних робіт на церкві Спаса на Берестові* in the edition *Культурна спадщина Києва: дослідження та охорона історичного середовища*, АртЕк, Київ, 2003, с. 58–59.

<sup>18</sup> See А. И. Комеч, *Древнерусское зодчество конца X – начала XII в.* ... с. 149.



orientation of the church, which can be seen as a certain analogy to the design of the facades of the Trinity Gate Church. Crosses made of brick played an important role in the decoration of the facade walls of the Church of the Savior in Berestov.

Nothing is known about the type of vaults of the upper ceilings and the number of domes of the Church of the Savior. But on the western wall of its narthex there are traces of the adjoining ceiling of the antechurches in the form of a trefoil arch (Fig. 6c). Such a construction of the vault, made of brick, could exist only in combination with wooden beams, the ends of which are preserved in the thickness of the wall (Fig. 6d). Given the height of the Church of the Savior in Berestov and the peculiarities of the design of its walls G. Shtender, and later V. Bulkin considered this church as the initial stage formation of pillar-shaped churches development<sup>19</sup>.

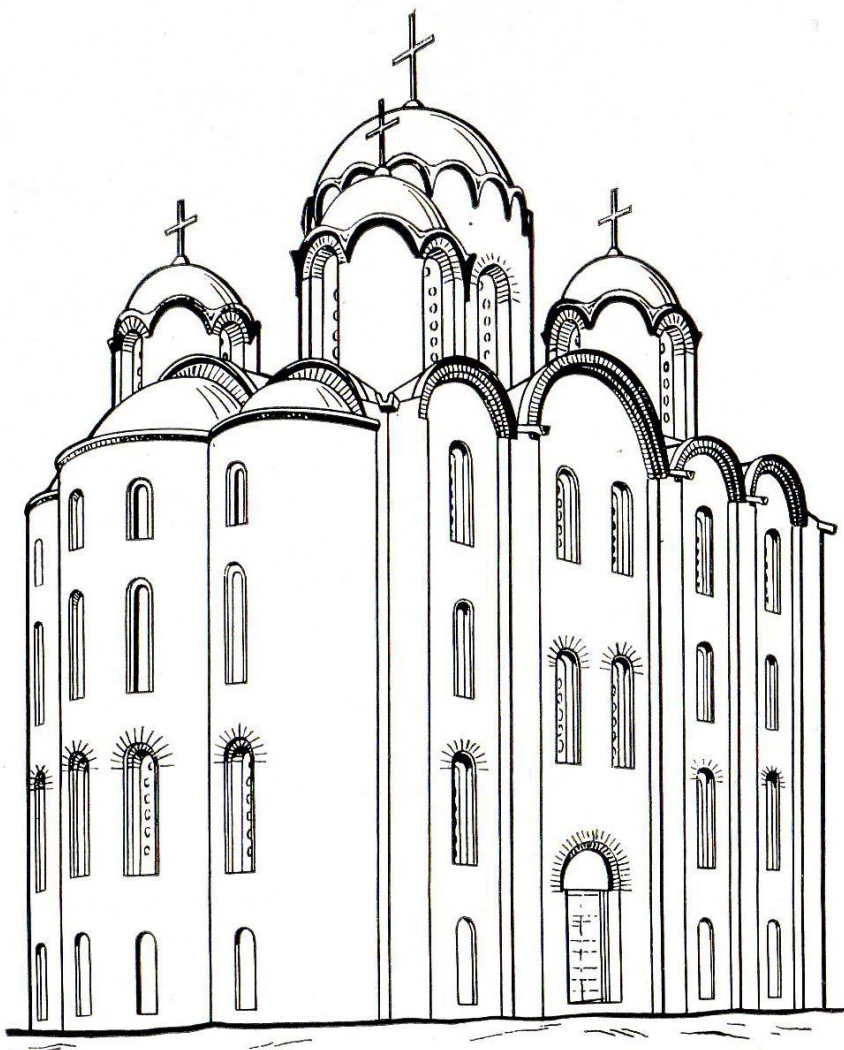


**Fig. 6 a, b, c, d** Church of the Savior in Berestov in Kyiv: **a)** view from the south-west; **b)** reconstruction; **c)** the western wall of the narthex; **d)** reconstruction of the western antechurch

<sup>19</sup> Г. М. Штендер, *Трёхлопастное покрытие церкви Спаса на Берестове (к вопросу о художественном образе храмов второй половины XI – начала XII века)* in the edition *Памятники культуры. Новые открытия. Ежегодник 1980*, Наука, Ленинград, 1981, с. 541. В. А. Булкин, “О времени постройки церкви Спаса на Берестове” in “Археология”, 2/1995, с. 143.

Thus, in the church building of Kyiv in the early 12<sup>th</sup> century there were already two options for a compositional solution. The first is represented by St. Michael's Golden-Domed Cathedral, which, repeating the horizontally oriented composition of the Dormition Cathedral of Pechersk Monastery, is already a finally formed arch-gabled church. The second variant is just beginning to take shape, it is represented by Trinity Gate Church and the Church of the Savior in Brestov with a vertical compositional orientation. Although the presence of a narthex in the Church of the Savior gave it a horizontal orientation, the considerable height and similarity of the design of its facades with the facades of Trinity Gate Church indicate a common typology of both church compositions.

Novgorod churches, built in the same period as Kyiv Church of the Savior in Berestov, are also characterized by a vertical orientation of the main volumes. These are St. Nicholas Cathedral on the Yaroslav's Court (founded in 1113, Fig. 7), Nativity of the Virgin Cathedral in St. Antony's monastery (1117–1122), St. George Cathedral in Yuri's monastery (1119). Like Kyiv Dormition and St. Michael's Golden-Domed Cathedrals, these are arch-gabled four-pillared churches with narthexes (a simple cross-domed type), but their height in relation to the size of the plans is noticeably larger than that of Kyiv cathedrals. This brings the proportions of these Novgorod cathedrals closer to the proportions of Kyiv Church of the Savior in Berestov, but here we should see the influence of St. Sophia Cathedral in Novgorod, whose height is also greater than that of St. Sophia Cathedral in Kyiv. The volume of the named Novgorod churches of the first quarter of the 12<sup>th</sup> century cubic, although they are perceived elongated upwards and not only due to the height of the walls, but also due to the design of the facades, which have no horizontal divisions, so the windows and niches fill the gaps between the vertical lesenes. Another distinctive feature of Novgorod churches is multi-domed. St. Nicholas Cathedral on the Yaroslav's Court had five domes on drums (central and four smaller ones above the corner compartments of the nine-celled structure), Nativity of the Virgin Cathedral in St. Antony's monastery and St. George cathedral in Yuri's monastery had three domes each (central, one above the corner southwest compartment and another over the stair tower). A specific feature of Novgorod churches is almost the same height of the arched gables over small and central divided parts of walls, which was achieved by lowering the crowns of the central arched gables. All Novgorod churches were built in a mixed technique "opus mixtum" of stone and brick with the use of a large number of volkhov flagstone in masonry. Lack of genetic link between the Church of the Savior in Berestov in Kyiv and Novgorod churches of the first quarter of the 12<sup>th</sup> century is confirmed by the fact that the high-rise version of the compositional construction is not widespread in Novgorod in the future.



**Fig. 7** St. Nicholas Cathedral on the Yaroslav's Court in Novgorod, reconstruction

In the first quarter of the 12<sup>th</sup> century in Chernihiv a new variant of arch-gabled church is being formed, which combines the three-dimensional solution of Kyiv arch-gabled churches with Western European construction and masonry techniques. Here during this period Sts. Boris and Gleb's Cathedral (the first chronicle mention of 1123) and the Dormition Cathedral of Yeletsky Monastery (chronicle date is absent, variants of dating from the end of the 11<sup>th</sup> century to the middle of the 12<sup>th</sup> century) are compositionally similar to the Dormition Cathedral of Pechersk Monastery and St. Michael's Golden-Domed Cathedral (Fig. 8, Fig. 9). Both Chernihiv churches are four-

pillared with narthexes (simple cross-domed type). Their volumes are elongated parallelepipeds with springers of all arched gables located on the same level. The altar compartments of both churches no longer have declines in the interiors. The statics of their volumes, as in Kyiv cathedrals (the Dormition Pechersk Monastery and St. Michael's Golden-Domed), is emphasized by the tiers of windows above and below the level of the choir, as well as windows and niches on the arched gables. But, in contrast to Kyiv churches of the 11<sup>th</sup> and early 12<sup>th</sup> centuries, the Dormition Cathedral of Yeletsky Monastery and Sts. Boris and Gleb's Cathedral were built only of brick in "opus isodos" masonry technique, which came from Western Europe. The side parts of the choir of these churches are based on cross vaults, which are also borrowed from the Western Europe and in Kyiv architecture of the 11<sup>th</sup> – first decades of the 12<sup>th</sup> century are not known. In addition, semi-columns adjoining the flat lesenes appear on the facades of Chernihiv churches, as well as Lombard band and perspective portals typical to Romanesque architecture. This variant of the arch-gabled church, which combined Byzantine and Western European traditions, was later replicated in large areas of the southwestern regions of Old Rus. Since the late 20's of the 12<sup>th</sup> century similar churches are being built in Kyiv, Kaniv, Pereiaslav, Volodymyr-Volynskyi, Smolensk, and Staryia Riazan.



**Fig. 8** Sts. Boris and Gleb's Cathedral in Chernihiv, reconstruction



**Fig. 9** Domition Cathedral of Yeletsky Monastery in Chernihiv, reconstruction of the western façade

In addition to Chernihiv interregional variant and local variants of arch-gabled church existed in the 12<sup>th</sup> century, which did not go beyond their region. These are Pskov and Staraia Ladoga in Novgorod land. Pskov variant is represented by the Cathedral of St. John the Baptist (1130–1140s). Typologically, it is a four-pillared church with a narthex, topped by three domes on drums. But this church is not marked by height, it is rather low-lying, and its volume is an east-west elongated parallelepiped without horizontal divisions and without a clear system of window placement in the almost complete absence of decorative niches. We can say that the compositional solution of the Cathedral of St. John the Baptist is a combination of Kyiv (horizontally oriented volume) and Novgorod traditions of the first third of the 12<sup>th</sup> century (multi-dome, lack of horizontal divisions). The churches of Staraia Ladoga are represented by the Dormition Church

(mid. 12<sup>th</sup> century) and St. George's Church (mid. 1160s), which are four-pillared without a narthex and with one dome. Their volumes are cubic without horizontal divisions and without a clear tier arrangement of windows. In the second half of the 12<sup>th</sup> century churches similar to those of Staraia Ladoga are also being built in Novgorod (the Church of the Annunciation on the Myachino (1179), Sts. Peter and Paul's Church on Sinicha Hill (1185–1192), and the Church of the Savior on Nereditsa (1198)).

From the middle of the 12<sup>th</sup> century they started building arch-gabled churches using the Romanesque technique of construction of quadra stones in Vladimir-Suzdal land. The remaining churches of this type are the Dormition Cathedral (1158–1160, 1185–1189), St. Demetrius Cathedral (1193–1197), the Church of the Intercession on the Nerl (1165) in Vladimir, and the Transfiguration Cathedral in Pereyaslav-Zalessky (1152), the church of Sts. Boris and Gleb's in Kideksha (1152). In addition to the Dormition Cathedral, these churches are four-pillared without a narthex, topped by a single dome. The Dormition Cathedral was originally a four-pillared with a narthex, and after the fire, in the process of reconstruction in 1185–1189, it was surrounded by additional compartments from the north, west and south, as a result of which it became five-naves, and its central dome was supplemented by four small domes. All these temples are characterized by Romanesque decoration. The middle height of all facades in the churches of Vladimir is marked by an elegant carved arcade frieze, and on the walls of the apses such friezes are placed under the base of the conches. All these cathedrals have perspective portals, the same perspective archivolts of windows of the top tier, figurine-shaped lesenes with the pro-thinned-out bases, a carved sculptural decor. In the church in Kideksha the horizontal division of the facades is made only by an arcade frieze, and in the cathedral in Pereyaslav-Zalessky the arcade frieze is decorated only by the tops of the apses, and the walls of the main volume are devoid of horizontal divisions.

Masonry of quadra stones was characteristic of Halych land, where they began to build churches in this technique from the end of the first quarter of the 12<sup>th</sup> century. All Halych churches, except St. Panteleimon church (late 12<sup>th</sup> century), are known from archaeological excavations. These are mainly four-pillared churches without narthexes: St. John's Church in Peremyshl (before 1126), the Church in Zvenigorod (until 1144), the Church of the Savior (1152) and the Church in Tsvintariski tract (third quarter of the 12<sup>th</sup> century) in Halych, Sts. Cyril and Methodius Church (second half of the 12<sup>th</sup> century) near Halych. The Dormition Cathedral in Halych was four-columned, surrounded on the south, north and west by galleries. But how the walls of Halych churches ended is unknown.

In most other regions of Rus, the "opus isodos" masonry technique dominated, which spread along with Chernihiv variant of arch-gabled churches, although not everywhere. In Novgorod, churches continued to be

built in a mixed technique, a variant of “opus mixtum”, dating back to Kyiv tradition of the 11<sup>th</sup> century, but with the use of local volkhov flagstones. And in the principality of Polotsk the brick masonry with a recessed row was used, similar to the masonry of Kyiv Church of the Savior in Berestov. According to P. Rappoport, the use of such masonry techniques indicates the transition of Kyiv artel to Polotsk<sup>20</sup>. But the only church in Polotsk that has preserved the walls and ceilings under later layers is the Church of the Savior of Euphrosyne Monastery (mid. 12<sup>th</sup> century). Unfortunately, other Polotsk churches are known only from archeological excavations. These are the churches in Dytynets and the Lower Castle, cathedrals of Belchytsky Monastery (the Great Cathedral, Sts. Boris and Gleb’s Church and St. Paraskeva Piatnitsa Church), the Church-tomb of Euphrosyne Monastery. On the basis of the plans of these cathedrals, we can identify several variants for their compositional solution<sup>21</sup>.

The first variant is represented by the Great Cathedral of Belchytsky Monastery, which is considered to be the earliest among Polotsk churches of this period (20–30s of the 12<sup>th</sup> century). It was a large six-pillared cathedral (four-pillared complex type without a narthex). Its front lesenes were flat, the antechurches adjoining three entrances. N. Voronin believed that the Great Cathedral of Belchytsky Monastery is the result of the composition development of Kyiv Church of the Savior in Berestov<sup>22</sup>. But the peculiarity of the three-dimensional solution of Belchytsky monastery cathedral was the movement of the dome one division to the west, which fundamentally transformed its composition, turning it into a central one<sup>23</sup>. With this decision, the cathedral, according to P. Rappoport, should have had a raised central part<sup>24</sup>. The development of the compositional variant of the Great Cathedral of Belchytsky Monastery was probably continued by the Church in Dytynets, the dome of which also rests on the western pillars. It had southern and northern antechurches, each with a semicircular apse in the east (it is

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<sup>20</sup> П. А. Раппопорт, *Зодчество Древней Руси*, Наука, Ленинград, 1986, с. 80.

<sup>21</sup> Archaeological excavations opened the foundation ditches (in some places the foundations have been preserved) only the apses and the found bricks of the Church on the Ditch in Polotsk (See П. А. Раппопорт, “Полоцкое зодчество XII века” in “Советская археология”, 3/1980, с. 155–156). According to the schematic drawing of the end of the 18<sup>th</sup> century there existed also the Church with Side Apses of Belchytsky Monastery (See П. А. Раппопорт, *Русская архитектура X–XIII вв.: каталог памятников*, Наука, Ленинград, 1982, с. 99). However, this information is not enough to establish the compositional solution of these churches.

<sup>22</sup> Н. Н. Воронин, *Бельчицкие руины* in the edition *Архитектурное наследство*, Вып. 6, Гос. изд-во литературы по строительству и архитектуре, Москва, 1956, с. 17.

<sup>23</sup> П. А. Раппопорт, “Полоцкое зодчество XII века” in “Советская археология”, 3/1980, с. 157. В. А. Булкин, “О времени постройки церкви Спаса на Берестове” ... с. 143.

<sup>24</sup> П. А. Раппопорт, “Полоцкое зодчество XII века” ... с. 157.



assumed that there was also an antechurch on the western side<sup>25</sup>). Figurine-shaped lesenes appear on the facades of the church<sup>26</sup>.

The second variant of the Polotsk churches is represented by St. Paraskeva Piatnitsa Church of Belchytsky Monastery. It was a small pillarless church with a rectangular apse, which had an underground crypt for burial<sup>27</sup>. N. Voronin noted the elongation of the proportions of St. Paraskeva Piatnitsa Church upwards, as indicated by the remains of the walls and frescoes of this church, which still existed in the 1930s<sup>28</sup>.

The third variant is the Church-tomb of Euphrosyne Monastery and the Church in the Lower Castle. Both churches were four-pillared without a narthex with one protruding apse. They were surrounded by galleries on the west, south and north sides<sup>29</sup>. Judging by the difference in the thickness of the walls of the core and the galleries, it is obvious that the galleries of the church were much lower than the main volumes. Thus, the three-dimensional composition of the church was likely to be stepped, emphasizing the dominance of the central dome<sup>30</sup>.

The fourth variant is represented by Sts. Boris and Gleb's Church of Belchytsky Monastery and the Church of the Savior of Euphrosyne Monastery. Their plans are almost the same, but the Church of the Savior had galleries, whereas Sts. Boris and Gleb's did not. N. Voronin believed that Sts. Boris and Gleb's Church represents the "first edition" of the architectural type, which in its completed form is represented by the Church of the Savior of Euphrosyne Monastery<sup>31</sup>. O. Ioannisian suggests that the first monument of this type could be the Church of the Annunciation in Vitebsk<sup>32</sup>, built of blocks of hewn stones, alternating with two or three rows of bricks (in Old Rus this technique is only found in Sts. Boris and Gleb's Church in Novogrudok). On building Vitebsk church in Polotsk, Sts. Boris and Gleb's church was erected of brick in recessed row masonry technique.

The only remaining Church of the Savior of Euphrosyne Monastery is a small four-pillared church with a narthex, one semicircular protruding apse and side apses recessed into the wall. The peculiarity of this church is the very narrow side naves, which will later become characteristic of the pillar-shaped churches of the turn of the 12<sup>th</sup> – 13<sup>th</sup> centuries. The church of

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<sup>25</sup> Id., *Русская архитектура X–XIII вв.: каталог памятников*, Наука, Ленинград, 1982, с. 94.

<sup>26</sup> *Ibid.*

<sup>27</sup> Н. Н. Воронин, *Бельчицкие руины* ... с. 12.

<sup>28</sup> *Ibid.*, с. 13.

<sup>29</sup> П. А. Раппопорт, "Полоцкое зодчество XII века" ... с. 159.

<sup>30</sup> *Ibid.*, с. 149, 155.

<sup>31</sup> Н. Н. Воронин, *Бельчицкие руины* ... с. 9.

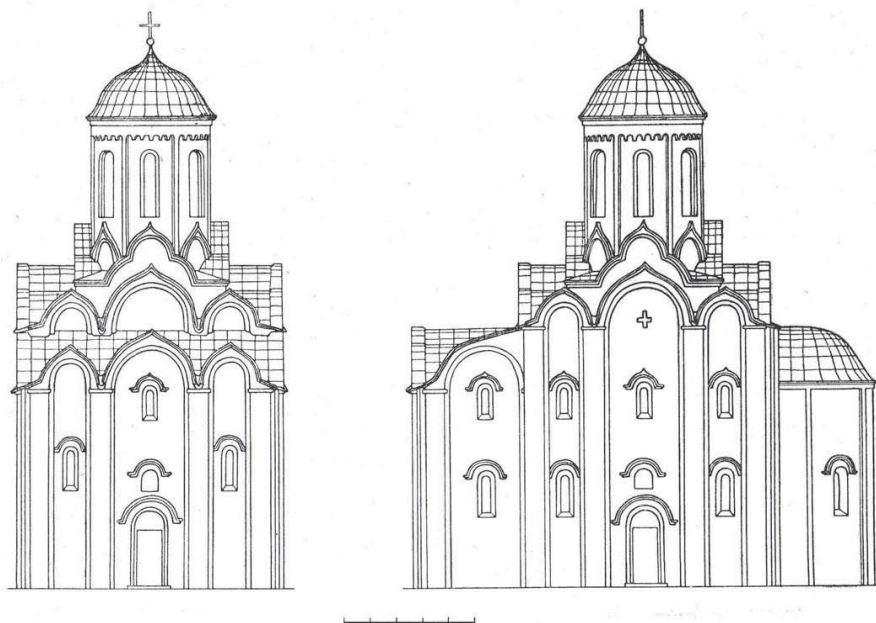
<sup>32</sup> О. М. Иоаннисян, *Зодчество первой половины – середины XII в.* in the edition *История русского искусства. Т. 2/1: Искусство 20–60-х годов XII века*, Государственный институт искусствознания, Москва, 2012, с. 126.

the Savior was surrounded by the galleries on the western, southern and northern sides<sup>33</sup>, which are the elements of a vertically oriented stepped composition. Sts. Boris and Gleb's Cathedral in Chernihiv, Sts. Peter and Paul's Church in Smolensk, St. Demetrius Cathedral in Vladimir and other churches had similar galleries, but in the arch-gabled churches, the galleries emphasize the horizontal orientation of the main volume. The change in the compositional function of the galleries of the Savior Church was a consequence of the lowering of the narthex and the apse, which fundamentally distinguishes such a stepped construction from the horizontally oriented arch-gabled churches. But the main and fundamental difference between the Church of the Savior of Euphrosyne Monastery (Fig. 10) and the arch-gabled churches with both horizontal and vertical orientation (Kyiv Trinity Gate Church, Novgorod churches of the first quarter of the 12<sup>th</sup> century) is the completion of its facades, which does not correspond to the ceiling constructions. The arms of its spatial cross have "standard" barrel vaults with the direction of the crowns along the axes of the arms facing the facades with large arched gables, the corner compartments of the nine-celled structure are covered with domes (western pair) and barrel vaults with the orientation of the crowns west-east and the side compartments of the narthex had barrel vaults with a south-north crowns orientation. The ends of the narthex have constructive arched gables, but the spandrels between their vaults and the wall of the nine-celled core are filled with masonry and the edges of these divided parts of walls have a S-shaped contour, and small decorative arched gables are on the western facade. All the small arched gables of the nine-celled core were decorative because they were either adjoining the slopes of the domed or barrel vaults or were built on the conches of the side apses. The vertical orientation of the overall composition is emphasized by the basement under the drum of the dome, which is decorated on four sides with trefoil arches built over the arches of the drum, and there were additional decorative arched gables between them on the very drum. Thus, the central part was raised in this church with a lowered apse and narthex and galleries. As a result, the standard cross-domed church acquired a unique interpretation: its volume rose step by step, giving the three-dimensional composition of the building the features of the pillar<sup>34</sup>.

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<sup>33</sup> Е. Н. Торшин, Дук, Д. В., Иоаннисян, О. М., Зыков, П. Л., Коц, А. Л., *Галерея Спасо-Преображенской церкви Евфросиньева монастыря в Полоцке (предварительные итоги архитектурно-археологических исследований)* in the edition *Беларускае Падзвінне: вопыт, методика і вынікі палявых даследаванняў*, ПДУ, Новополоцк, 2016, с. 22–40.

<sup>34</sup> Н. Н. Воронин, *Бельчицкие руины ...* с. 5.



**Fig. 10** Church of the Savior of Euphrosyne Monastery in Polotsk, reconstruction of the western and southern façade

Among the listed compositional variants of Polotsk architecture, the first (complex cross-domed church without a narthex with three antechurches) and the third (a simple four-pillared church without a narthex surrounded by one-storied galleries) ones proved to be promising and were developing in the architecture of Smolensk, and later in other regions. The second (a small pillarless church with a vertical orientation of the volume) and the fourth (horizontally oriented four-pillared church with a narthex and a vertical orientation of the central part) variants failed to develop. But it is important to emphasize that they also had a vertically oriented compositional construction and can be considered as variations in the process of finding out and working out a vertically oriented composition.

P. Rappoport believed that in Polotsk principality a new direction of pillar-shaped churches appeared earlier than in other Old Rus architectural schools, that became characteristic of the most lands at the end of the 12<sup>th</sup> – the beginning of the 13<sup>th</sup> century. In the late 80's – early 90's of the 12<sup>th</sup> century a Polotsk architect was summoned to Smolensk, where he built Michael the Archangel Church, starting a local school there, which is associated with the flourishing of Smolensk architecture<sup>35</sup>. Smolensk Michael

<sup>35</sup> П. А. Раппопорт, “Полоцкое зодчество XII века” ..., с. 161.

the Archangel Church (80–90s of the 12th century) is a four-pillared cross-domed church without a narthex with a protruding eastern part. The central apse protrudes in a semicircle, the side apses are lowered and sunk into the thickness of the wall (rectangular on the outside). Its western, northern and southern facades are adjoined by antechurches, the space of which is connected by high arched opening to the naos. The lowered side apses and antechurches give the building forms the character of a dynamic increase. The vertical orientation of the construction on the facades is emphasized by figurine-shaped lesenes. The arms of the spatial cross were covered, as in all arch-gabled churches of the 12<sup>th</sup> century, with barrel vaults, located in the interior slightly above the arches under the dome drum. But at the same time the corner compartments of the church are no longer covered with barrel vaults, but with half-barrel vaults, which form a trefoil completion with arched gables of the spatial cross on the facades<sup>36</sup> (Fig. 11a).

In Kyiv land, the earliest monument of the new direction of pillar-shaped churches is St. Basil's Church in Ovruch (about 1190), but only the walls of the eastern part have remained, so it is impossible to talk about the construction of its ceilings and the nature of the facades. St. Paraskeva Piatnitsa Church in Chernihiv (the turn of the 12<sup>th</sup> – 13<sup>th</sup> centuries) belongs to the same direction (Fig. 11b). This is a small four-pillared church without a narthex, antechurches and galleries. All the facades of St. Paraskeva Piatnitsa Church had trefoil edges, and the arms of the spatial cross had a three-stepped shape, in which the arches under of the dome drum form a middle step, the lower one is the vaults of the spatial cross, and the upper one is formed by decorative arched gables adjoining the dome drum<sup>37</sup>. The arches under the dome drum are located above the vaults of the arms of the spatial cross both outside and inside. The type of arches construction, described above, differs fundamentally St. Paraskeva Piatnitsa Church from the Savior Church of Euphrosyne Monastery in Polotsk and from Michael the Archangel Church in Smolensk, where arches are traditionally located below the vaults of the spatial cross. The unusual thing about Chernihiv St. Paraskeva Piatnitsa Church is that the ceilings of its corner compartments have a two-storied constructoin: the lower arches are semicircular in shape, and the upper ones are in the form of arc-boutants, introduced into the interior of the building<sup>38</sup>.

At the end of the 12<sup>th</sup> – in the first third of the 13<sup>th</sup> century pillar-shaped churches, except Smolensk, Ovruch, and Chernihiv, are built in Kyiv, Belgorod, Novgorod-Siversky, Putivl, Vshchizh, and Old Ryazan, but all of

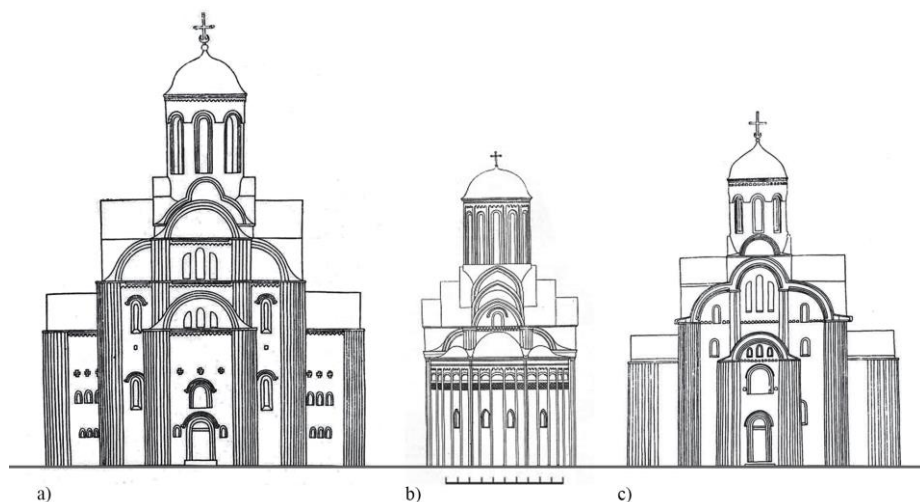
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<sup>36</sup> С. С. Подъяпольский, *Церковь Архангела Михаила* in the edition Воронин, Н. Н., Раппопорт, П. А. *Зодчество Смоленска XII–XIII вв.*, Наука, Ленинград, 1979., с. 173, 178, 182–183.

<sup>37</sup> П. Барановский, *Собор Пятницкого монастыря в Чернигове ...* с. 20.

<sup>38</sup> *Ibid.*, с. 19.

them are known only from archeological excavations. Only in Novgorod in St. Paraskeva Piatnitsa Church the walls have been preserved to the upper vaults (except for the southern antechurch, 2 m of which has been preserved), in some places there are remains of vaults. However, the height of the preserved walls indicates that the church had a pillar composition and was characterized by a dynamic increase in the height of the volumes to the center (Fig. 11c). Traces of fixation of the vault circle centres and arched gables were found on the walls of St. Paraskeva Piatnitsa Church, as well as the remains of the northwestern vault of the church, which made it possible to reconstruct the trefoil completion of the facades of the nine-celled core<sup>39</sup>.



**Fig. 11 a, b, c** Pillar-shaped churches: **a)** Church of Michael the Archangel in Smolensk, the reconstruction of the western façade; **b)** St. Paraskeva Piatnitsa Church in Chernihiv, reconstruction of the eastern façade; **c)** St. Paraskeva Piatnitsa Church in Novgorod, reconstruction of the western façade

The ceilings constructions and the edges of facade walls of three more partially preserved churches of this type are not known, they are built of stone quadras in the Western European tradition: St. George's Cathedral in Yuriy-Polsky, Nativity of the Virgin Cathedral in Suzdal and St. Panteleimon Church in Halych.

Yu. Asieiev singled out two variants of the vertically-tiered compositions formation on the basis of the study of pillar-shaped churches remains. The first variant with elevated arches under the dome drum without antechurches and galleries (Ovruch, Belgorod, Kyiv, Chernihiv). The second variant is with antechurches (Novgorod-Siversky, Putivl) or galleries

<sup>39</sup> Т.В. Гладенко, Л.Е. Красноречьев, Штендер, Г.М., Шуляк, Л.М., *Архитектура Новгорода в свете последних исследований* in the edition *Новгород. К 1100-летию города. Сборник статей*, Наука, Москва, 1964, с. 207.

(Vshchizh), providing a gradual increase in mass to the center, but without a constructive increase in the arches under the dome drum<sup>40</sup>. Both variants of pillar-shaped churches are characterized by trefoil edges of facades, which changed the arch-gabled edges, as well as figurine-shaped lesenes instead of flat lesenes with semi-columns. It can be assumed that, in addition to the two variants of compositional solution singled out by Yu. Asieiev (with constructionally stepped top without galleries and antechurches and with antechurches or galleries without constructional top), there existed a variant that united them, that is, it had antechurches or galleries and at the same time a constructionally stepped completion (elevated arches under the dome drum).

Summing it up, we can state that the appearance of the pillar compositional construction coincides with the final period of arch-gabled churches formation. The initial stage of arch-gabled church development is represented by St. Sophia Cathedral in Novgorod, the small divided parts of walls of which have constructive and decorative arched gables, combined with other types of edges, so it can be considered a “proto-arch-gabled” church. The intermediate stage is the Dormition Cathedral of Pechersk Monastery, and St. Michael’s Golden-Domed Cathedral in the early 12<sup>th</sup> century demonstrates the already formed composition, which was the focus of regional variants of arch-gabled churches in Chernihiv and Novgorod, and later in Halych, Pskov, Staraia Ladoga, and Vladimir-Suzdal land. Among them, the closest in composition to St. Michael’s Golden-Domed Cathedral, the cathedrals in Chernihiv became an interregional variant of the arch-gabled church, which was the dominant standard in the southwestern regions of Rus until the end of the 12<sup>th</sup> century.

The formation of the pillar composition was not set in an empty place. In the churches of the 11<sup>th</sup> century, which do not show any signs of such a composition, there are some details inherent in pillar-shaped churches (stepped total volume due to the pyramidal composition of domes (St. Sophia Cathedral in Kyiv, St. Sophia Cathedral in Novgorod), stepped vaults of the arms of the spatial cross (Sophia of Kyiv), of galleries (Sophia of Kyiv, Sophia of Novgorod); vertical orientation of the total volume (Sophia of Novgorod); vertically-oriented interior space (Sophia of Novgorod); figurine-shaped lesenes (Sophia of Kyiv, the Transfiguration Cathedral in Chernihiv). The first signs of a vertically oriented composition are recorded in the first quarter of the 12<sup>th</sup> century within the newly formed arch-gabled church (Trinity Gate Church of Pechersk Monastery and the Church of the Savior in Berestov in Kyiv, St. Nicholas Cathedral on the Yaroslav’s Court, Nativity of the Virgin Cathedral in St. Antony’s monastery, St. George cathedral in Yuriy’s monastery in Novgorod). In the second and third quarters of the 12<sup>th</sup>

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<sup>40</sup> Ю. С. Асеев, *Зодчество Приднестровской Руси конца XII – первой половины XIII веков* ... с. 24–25, 36–37.

century there appeared several parallel variants of the vertical composition. The main center of this period was Polotsk, where a purposeful search for an aesthetic model of vertical composition was probably carried out. In the 80–90's of the 12<sup>th</sup> century, pillar-shaped churches were being built in various cultural centers (Smolensk, Kyiv, Ovruch, and Belgorod). During this period, the standardization of the type takes place and there appears probably a construction corresponding to the stepped completion of the churches (St. Paraskeva Piatnitsa Church in Chernihiv). This is followed by the rapid spread of the interregional type of pillar-shaped churches.

Here, however, it should be emphasized that the above mentioned stages of pillar-shaped churches development are applied only to brick architecture. In stone architecture of Vladimir-Suzdal principality during the 12<sup>th</sup> century, only some features of such compositions are recorded, in particular pyramidality at the expense of one-storied galleries (Church of the Intercession on the Nerl, St. Demetrius Cathedral in Vladimir) and figurine-shaped lesenes (all known churches of the second half of the 12<sup>th</sup> century). And only in the pre-Mongol period (1220–1230s) there appeared churches, the preserved parts of which suggest the existence of a pillar-shaped composition. These are Nativity of the Virgin Cathedral in Suzdal (1225) and St. George's Cathedral in Yuriy-Polsky (1234) – four-pillared cross-domed cathedrals with three antechurches open in the naos (northern and southern antechurches were one-storied, western – two-storied). However, these cathedrals have remained only half the height, so the nature and design of their facade edges are unknown, but the existence of antechurches proves its pyramidal composition. We can assume that in stone architecture the formation of this type of cathedrals also took place, but slower. It should not be ruled out that the stone architecture borrowed the pillar-shaped composition formed in the brick architecture as the completed variant.

In general, we can state that at the turn of the 12<sup>th</sup>–13<sup>th</sup> centuries, pillar-shaped cathedrals took over the role of interregional type, which for almost the entire 12<sup>th</sup> century belonged to several variants of arch-gabled cathedrals. Thus, pillar-shaped cathedrals can be considered to be the second Old Rus architectural tradition after the arch-gabled cathedrals, which developed on the basis of transplanted Byzantine forms. But in 1240 the development of this tradition was interrupted by the Mongol invasion.

### List of illustrations

**Fig. 1** Transfiguration Cathedral in Chernihiv: **a)** view from the west (photo by K. Mikheienko); **b)** reconstruction of the western facade by M. Kholostenko (, Н. В. Холостенко, “Исследования Спасского собора в Чернигове” in the edition *Реставрация и исследования памятников культуры*, Вып. 3, Стройиздат, Москва, 1990, рис. 21)



**Fig. 2** St. Sophia Cathedral in Novgorod, reconstruction of the western facade by G. Shtender (Г. М. Штендер, “Первичный замысел и последующие изменения галерей и лестничной башни Новгородской Софии” in the edition *Древнерусское искусство. Проблемы и атрибуции*, Наука, Москва, 1977, с. 49)

**Fig. 3** Domition Cathedral of Pechersk Monastery in Kyiv: **a)** reconstruction of the northern facade by M. Kholostenko (М. В. Холостенко, “Нові дослідження Іоанно-Предтеченської церкви та реконструкція Успенського собору Києво-Печерської лаври” in the edition *Археологічні дослідження стародавнього Києва*, Наукова думка, Київ, 1976, рис. 14); **b)** scheme of the northern wall reconstruction by M. Kholostenko (М. В. Холостенко, “Успенський собор Печерського монастиря” in the edition *Стародавній Київ*, Наукова думка, Київ, 1975, рис. 39); **c)** scheme of the northern wall reconstruction by I. Anisimov, taking into account the remarks of A. Komech (І. О. Анісімов, “Деякі особливості первісної архітектури Успенського собору Києво-Печерської лаври (авторська версія)” in the edition *Лаврський альманах: Києво-Печерська лавра в контексті української історії та культури: зб. наук. праць*. Вип. 12, ВІПОЛ, Київ, 2004, рис. 2)

**Fig. 4** St. Michael's Golden-Domed Cathedral in Kyiv: **a)** drawing of the southern facade by I. Morgulevsky (М. К. Каргер, *Древний Киев. Очерки по истории материальной культуры древнерусского города. Т. II. Памятники киевского зодчества X–XIII вв.* Изд-во АН СССР, Москва, Ленинград, 1961, рис. 91); **b)** reconstruction of the southern facade by Yu. Asieiev (А. И. Комеч, *Древнерусское зодчество конца X – начала XII в. Византийское наследие и становление самостоятельной традиции*, Наука, Москва, 1987, с. 276)

**Fig. 5** Trinity Gate Church of Pechersk Monastery in Kyiv: **a)** view from the south (photo by K. Mikheienko); **b)** reconstruction by Yu. Asieiev (Ю. С. Асеев, *Архитектура древнего Киева*. Будівельник, Киев, 1982, с. 87)

**Fig. 6** Church of the Savior in Berestov in Kyiv: **a)** view from the south-west (photo by K. Mikheienko); **b)** reconstruction by G. Shtender (Г. М. Штендер, “Трёхлопастное покрытие церкви Спаса на Берестове (к вопросу о художественном образе храмов второй половины XI – начала XII века)” in the edition *Памятники культуры. Новые открытия. Ежегодник 1980*, Наука, Ленинград, 1981, с. 538); **c)** the western wall of the narthex (photo by K. Mikheienko); **d)** reconstruction of the western antechurch by G. Shtender (Г. М. Штендер, “Трёхлопастное покрытие церкви Спаса на Берестове (к вопросу о художественном образе храмов второй половины XI – начала XII века)” in the edition *Памятники культуры. Новые открытия. Ежегодник 1980*, Наука, Ленинград, 1981, с. 537)

**Fig. 7** St. Nicholas Cathedral on the Yaroslav's Court in Novgorod, reconstruction by G. Shtender (А. И. Комеч, *Древнерусское зодчество конца X – начала XII в. Византийское наследие и становление самостоятельной традиции*, Наука, Москва, 1987, с. 300)

**Fig. 8** Sts. Boris and Gleb's Cathedral in Chernihiv, reconstruction by M. Kholostenko (Н. В. Холостенко, “Исследования Борисоглебского собора в Чернигове” in “Советская археология”, 2/ 1967, рис. 18)

**Fig. 9** Domition Cathedral of Yeletsy Monastery in Chernihiv, reconstruction of the western facade by M. Kholostenko (Н. В. Холостенко, “Архитектурно-археологическое исследование Успенского собора Елецкого монастыря в

Чернигове” in the edition *Памятники культуры. Исследования и реставрация*, Вып. 3, Изд-во АН СССР, Москва, 1961, рис. 8)

**Fig. 10** Church of the Savior of Euphrosyne Monastery in Polotsk, reconstruction of the western and southern facades by P. Rappoport and G. Shtender (П. А. Раппопорт, *Русская архитектура X–XIII вв.: каталог памятников*, Наука, Ленинград, 1982, рис. 25)

**Fig. 11** Pillar-shaped churches: **a)** Church of Michael the Archangel in Smolensk, the reconstruction of the western facade by S. Podyapolsky (П. А. Раппопорт, *Русская архитектура X–XIII вв.: каталог памятников*, Наука, Ленинград, 1982, рис. 23); **b)** St. Paraskeva Piatnitsa Church in Chernihiv, reconstruction of the eastern facade by P. Baranovsky (Всеобщая история архитектуры: в 12 т. / отв. ред. Ю.С. Яралов, Том 3, Стройиздат, Ленинград, Москва, 1966. рис. 18); **c)** St. Paraskeva Piatnitsa Church in Novgorod, reconstruction of the western facade by G. Shtender (П. А. Раппопорт, *Русская архитектура X–XIII вв.: каталог памятников*, Наука, Ленинград, 1982, рис. 18)

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