

**ART OF KIEVAN RUS OF
THE LATE 10TH – MID-11TH
CENTURIES**

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**ARCHITECTURE
OF THE LATE 10TH –
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Construction of stone developed in Rus' as a direct consequence of the adoption of Christianity. Together with the new religion the great tradition of world art came to Rus' from Byzantium.

The appearance of major Russian cities – Kiev, Chernigov and Novgorod – transformed dramatically from the late 10th to the mid-11th century. Although most of their buildings were made almost entirely of wood, the new stone cathedrals, which became the crucial dominants, with their stature and scale made the architectural landscape of Rus' look like the historical landscapes of European and Mediterranean civilisations.

Grand princes and their retinue commissioned the early stone structures. Cathedrals and churches were not many, but their scale, mosaics and frescoes, sanctuary screens with icons and sumptuous décor called for highly skilled architects, artists and sculptors. It was easy to find sundry hands among artisans of the Russian cities, but the senior masters, architects of the early structures and managers were Byzantine (Greek, according to the chroniclers), the carriers of tradition. This is attested by architectural forms and directly reported in an A.D. 989 chronicle saying about the construction of the Tithe Church, or Church of the Dormition of the Mother of God, the first stone church to be built in Kiev¹.

The Tithe Church opened the history of architecture in Kievan Rus', however neither it nor the cathedrals which followed were in any way beginners' work. They were masterpieces of world architecture to be truly appreciated only from the perspective of the millennium-old tradition of Antiquity and the Byzantine world. Only on such terms can their deep roots in world artistic experience and their original features be understood. That is why before turning directly to Kiev's landmarks, it is necessary to make an overview of the artistic expertise that Byzantium offered Rus' in the late 10th century.

By that time Byzantine art had already had centuries-long experience of ancient and Paleochristian culture development. It possessed an inexhaustible arsenal of architectural forms and techniques processed through intense and purposeful interpretation. Although far from being the only field of Byzantine construction efforts, church architecture predominated quantitatively and, more importantly, dictated the discursive and aesthetic meaning of the architectural language in general. The process of steady selection honed up the canonical form of the church building which met the functional needs of liturgical rituals, their symbolical meaning and, what was of paramount importance to Byzantine liturgy, was visually expressive and artistically beautiful.

All territories of the Byzantine Empire were involved in the evolutionary process, even though many of them retained their peculiarity and distinction in religious life and artistic practice. In the early period after Emperor Constantine had converted to Christianity, cathedrals and parish churches were built in the widespread form of basilicas – rectangular in plan, with a flat ceiling and one nave or with rows of columns dividing the space into a nave and two to eight aisles². Concurrently, central-plan style structures – square, octagonal, round, cruciform or complex – became common as baptisteries or martyria. They had adjoining rectangular or semicircular cells situated radially and often vaulted or domed³.

The Holy Sepulchre Rotunda built by Emperor Constantine I, a monumental mausoleum above the place of the drama and triumph of God incarnate, made centrally planned tent-roofed (and later domed) buildings forever universally attractive⁴. Already in the 4th century the cross-in-square church of the Holy Apostles in Constantinople brought together the idea of the four basilicas and the dominant role of central space emerging as a visually colossal embodiment of the Cross, the main Christian symbol⁵.

In the 5th century the desire to wed the dome to the basilica, the main type of a Christian temple, insistently carved its way in the eastern part of the former Roman Empire, which had Constantinople as its capital city. The Basilica B of Philippi in Greece, the church of Mayafarkin in Asia Minor and monastery churches in Egypt were ambitious attempts at such synthesis⁶. The spread of domed compositions was rooted in the age-old idea of the dome as a symbol of cosmos and the after-world, supplemented with the perception of the dome as the image of the world created by God for man to live in and to attain unity with his Creator. One of the most popular works in Christian writings, the *Hexameron* of St. Basil the Great, who left a consistent description of the creation of the world and commented on the course and meaning of the Creation, gave a rare insight into these intertwining religious and artistic concepts.

The image of God-created cosmos as interpreted by St. Basil anticipated the expressive domed temples of the 6th century so exactly that it can be seen as the crucial reason behind the architects' quests for such compositions.

The very attempt to use the story of the Creation in order to understand the Christian temple concept is not far-fetched or alien to historical material. Likening the artist to the Creator pervaded Christian literature of the early centuries and was one of the most common testimonies to the existence of God. St. Basil the Great began his description of the Creation with, "Shall we not rather stand around the vast and varied workshop of divine creation and, carried back in mind to the times of old, shall we not view all the order of creation?"⁷.

Historians of Byzantine architecture point to the special "suspended" nature of Byzantine domed structures, in which architectural forms develop downwards, from top to bottom, the special rhythm of curvilinear outline, "whirling motion" and the desire to dematerialise voluminous shapes. St. Basil the Great wonderfully foresaw that expressiveness in his picture of the Creation.

The course of the Creation giving the conceptual and dynamic centre to the entire composition is quite characteristic in this context. St. Theophilus of Antioch wrote that "Man, being below, begins to build a home from the ground and cannot raise it the way it should be nor make the roof before laying the foundation. The might of God is manifest in that He creates things from nothing and the way He likes. Because 'what is impossible with men is possible with God'. Therefore, the prophet says that He first made heaven, poised like a dome. 'In the Beginning, the prophet says, God made the Heaven.' So the heaven, like a dome, enclosed all matter that then looked like a mass. As to the form of them we also content ourselves with the language of the same prophet, when praising God 'that stretcheth out the heavens as a curtain and spreadeth them out as a tent to dwell in' (Is 40.22)"⁸. In full agreement with the above St. Basil says, "... as to the form of heaven we content ourselves with the language of the same prophet, when praising God: Set up the heavens like a chamber"⁹. The association with the dome highlights the reason for the focus on vault architecture.

Of no less interest is the striving after the compositional movement from top to bottom, which upsets the customary notions of art of Antiquity. The sense of volume having real weight disappears and the firmament turns out to be weightless. "Upon the essence of the heavens we are contented with what Isaiah says, for, in simple language, he gives us sufficient idea of their nature, 'The heaven was made like smoke,' (Is 51.6), that is to say, He created a subtle substance, without solidity or density, from which to form the heavens"¹⁰. Even the earth as a solid body rests upon itself, and the entire organism of the universe is sustained by the Creator's power. "Let us then reply to ourselves, and let us reply to those who ask us upon what support this enormous mass rests, 'In His hands are the ends of the earth.' (Ps 95.4) It is a doctrine as infallible for our own information as profitable for our hearers."¹¹

Another passage on the preponderance of circular movement in cosmos and its meaning is rich in content. "Do not then imagine, O man! that the visible world is without a beginning; and because the celestial bodies move in a circular course, and it is difficult for our senses to define the point where the circle begins, do not believe that bodies impelled by a circular movement are, from their nature, without a beginning. Without doubt the circle (I mean the plane figure described by a single line) is beyond our perception, and it is impossible for us to find out where it begins or where it ends; but we ought not on this account to believe it to be without a beginning. Although we are not sensible of it, it really begins at some point where the draughtsman has begun to draw it at a certain radius from the centre. Thus seeing that figures which move in a circle always return upon themselves, without for a single instant interrupting the regularity of their course, do not vainly imagine to yourselves that the world has neither beginning nor end. 'For the fashion of this world passeth away' (1 Cor 7.31) and 'Heaven and earth shall pass away' (Mt 24.35)"¹².

Noteworthy here is the strong focus on the rhythm of circular movement that makes St. Basil see the circle as such a weighty argument in favour of life being not created that he takes the trouble to dispute it. While, in his eyes, the expressiveness of the circle contradicts the transitory nature of all earthly things, structures connected with the invariable and eternal being of God should obviously possess such expressiveness. In domed temples, given the developed curvilinear rhythmic movement, the circular

1. Collected Russian Chronicles (CRC), 1998, col. 106; CRC, 1997, col. 121; Abramovich, 1991, pp. 5-9.

2. Krautheimer, 1986, pp. 39-92; Mango, 1985.

3. Grabar, 1943; Grabar, 1949, pp. 95-104; Khatchatrian, 1982; Krautheimer, 1986, pp. 39-92.

4. Krautheimer, 1986, pp. 73-5.

5. Downey, 1951, pp. 53-80; Mango, 1990, pp. 51-61; Krautheimer, 1969, pp. 27-34; Vyssotsky, A., Osminskaya,

6. For more about the Basilica B in Philippi see: Lemerle, 1945, p. 415 et al.; Krautheimer, 1986, pp. 253-4; the church

7. St. Basil the Great, 1845, p. 62.

8. St. Theophilus of Antioch, 1999, p. 149.

9. St. Basil the Great, 1845, p. 14.

10. Ibid.

11. Ibid., p. 16.

12. Ibid., p. 5.

shape appears only up high, raised above the whole of space and all the supports.

The complex and deliberate organisation of curvilinear movement in Byzantine cathedral interiors, coupled with the visual dematerialisation of shapes, leads to the transition from visual to inner contemplation. This art is of the spirit rather than the soul. In his *Treatise on the Inscriptions of the Psalms* Gregory of Nyssa aptly conveyed that characteristic: "The variegated mixture of things in the world whole, obeying some graceful and unbreakable harmony and in concord with itself through the collateral subordination of the parts, creates a universal melody. This melody is intelligible to the mind which, distracted by nothing, has risen above sensual perception and is listening to the song of the heavens"¹³.

Let us, however, go back to the picture of the world of St. Basil the Great. When passing judgement on the quality of Creation both he and the Creator himself, as it were, use a criterion of a clearly aesthetic nature. Beauty found here is not merely something pleasant to the eye: it has the highest meaning of demonstrating the quality of organisation immanently associated with God Himself. "And God saw that it was good. Scripture does not merely wish to say that a pleasing aspect of the sea presented itself to God. It is not with eyes that the Creator views the beauty of His works. He contemplates them in His ineffable wisdom."¹⁴ "What He esteemed beautiful is that which presents in its perfection all the fitness of art, and that which tends to the usefulness of its end. He, then, who proposed to Himself a manifest design in His works, approved each one of them, as fulfilling its end in accordance with His creative purpose. A hand, an eye, or any portion of a statue lying apart from the rest, would look beautiful to no one. But if each be restored to its own place, the beauty of proportion, until now almost unperceived, would strike even the most uncultivated. But the artist, before uniting the parts of his work, distinguishes and recognises the beauty of each of them, thinking of the object that he has in view. It is thus that Scripture depicts to us the Supreme Artist, prasing each one of His works..."¹⁵ "Anything useless has no place in God's works."¹⁶

Summing up the above, we can imagine the ideal temple which can be likened to the universe. To begin with, it is a vaulted structure and, based on stable Christian associations inherited from Antiquity and Eastern culture, the dome with its faultless circular outline forms its centre. Everything evolves from it, from top to bottom, and the rhythm of this movement is determined by the complex interface of its curvilinear outlines. The mass of the building should not cause a feeling of heaviness, but seem to be suspended without exercising any pressure on the supports. "In His hands are the ends of the earth." The temple should be filled with light. "The beginning of the creation is light, because light makes visible that which is being created."¹⁷ The strict purposefulness of the building can reveal the Creator's design better than the surrounding world, the diversity of which hides from view the whole of God's design.

The world as the temple created by God is an idea profoundly traditional for Christianity of the 2nd through the 4th century. The temple as the world was an innovative concept in the focus of attention of the architects of the 5th and 6th centuries that led them to creating stunning structures in the age of Justinian I.

The remarkable image of created Christian cosmos so visibly depicted by St. Basil the Great was embodied in architecture, with extraordinary fullness and artistic strength 150 years after he wrote his homilies. The Hagia Sophia of Constantinople fully and clearly summed up the ideas and images of the epoch, all the architectural quests of the 5th and the early 6th century, which remained unsurpassed in the Christian world.

The idea of a dome canopy became pivotal to the composition of the Hagia Sophia in Constantinople (532-7). Byzantine art inherited from Antiquity exceptional visual convincingness in the embodiment of the basic artistic ideas and images. There is no need to decipher them: above all they should be seen. They are no conundrums, but artworks of stunningly consummate immediate impact. The essence of the Hagia Sophia is not an abstract idea or cosmic symbol, but the unusual clarity and scale of the embodied image of cosmos crowned with a dome.

The dome of the Hagia Sophia seems weightless and soaring above the entire space. Perfectly aware of the fact,

contemporaries wrote about the dome as if suspended from a "golden chain". The perfectly complete ring of the dome encompasses the entire space. The movement bringing together cosmos spreads from it sideways and downwards. The curvilinear, as though rotating rhythm of large, medium and small arches of the semi-domes and vaults fills the building. The massive architectural forms are deliberately reduced. Big shapes are hidden in the marble lining of the walls, pierced by arcades and colonnades; columns incorporated in the walls make the shell thin and delicate. The downward hanging movement is central to the architectural organism, while the intentional dematerialisation of architectural surfaces creates an illusion of weightlessness in strict conformity with the aforementioned criterion of divine creation material – "like smoke".

The Hagia Sophia has retained the two-storey composition of the aisles and narthexes of many basilicas and centrally-planned church buildings of the preceding period. In the main cathedral of the empire the upper-floor gallery was a place of prestige intended for the empress and her retinue; church meetings were also held there. The official assignation of the gallery corresponded to the social structure of the imperial court and set the example for the similar organisation of many other temples. It was the preservation of the extensive gallery that predetermined the appearance of the two-storey extended arcades of the north and south arches under the dome.

The impression produced by the Hagia Sophia on the Byzantine world was so great that the dome canopy – a dome with four arches supported by the walls or piers – for ages became short of the dominant form of the church building. It was reproduced in large cathedrals throughout Byzantium and the surrounding Christian lands – in Constantinople (Hagia Irene), in the Caucasus (Jvari monastery, Hripsime church), in Syria (Qasr Ibn Wardan) and Thessaloniki (Hagia Sophia)¹⁸. The dome canopy was soon transformed to be wedded to the shape of the cross. As early as the 6th century the idea of a domed cross-in-square church was embodied clearly and distinctly in the Hagia Irene, the Church of St. Titus at Gortyna and Panagia Ekatonapyliani on the island of Paros. In them the cylindrical vaults adjoining the dome canopy arches visually combined the ideas of cosmos and the cross as the chief Christian symbol in wrapping up space¹⁹. It was a rare instance of an architectural form conveying profound symbols and images of a religious world outlook so naturally and visually.

In the 6th and 7th centuries the idea of a domed cross-in-square church was embodied in numerous versions of varying scale and composition. During that period the domed cross-in-square church flourished especially in Transcaucasian architecture. The cathedrals of Echmiadzin, Tsromi, Mren and Talin carried on the idea of producing an original structure in which the walls separating the arms of the cross and the corner compartments disappeared, transformed into piers under the dome. This architectural composition became canonical throughout the subsequent development of Byzantine architecture. Centrally-planned, it was uniform and well-balanced, its cruciform main space full of symbolical meaning. The three-part altar space occupying its east side fully merged with the main structure.

Given the incredible number of colonnades and columns inherited by the Eastern Mediterranean territories from Antiquity, the application of columns in Christian basilicas and all other structures became short of a rule. Soon they found their way to domed cross-in-square churches not only as additional components (in arcades, colonnades and porticos), but also as supports for the four main arches. Discoveries of the past few decades attest to the existence of such four-columned structures. All versions formed part of building practices in the Balkans, Asia Minor and the Middle East simultaneously and in parallel. However, with the passage of time traditions were re-interpreted under the impact of drastic changes in the life of those territories.

The empire was shattered by a severe crisis in the 7th century. Economic decline and Arab invasions undermined the state, whose territory shrank manifold. Although the colonisation of Slavic lands gave a new impetus to the decrepit economic and bureaucratic organism of the empire, it also caused cultural decay because the new ground for development proved far too peculiar. In the period from the 4th to the 7th century the construction of big cities spearheaded architecture, but from the 7th century on it was the cities that fell into the greatest decline. Architecture lost its momentum and bearings. The scale of construction dwindled and small buildings with simplified compositions preponderated not only in quantity. Architectural thinking continued to develop far more spontaneously. The architectural traditions

13. St. Gregory of Nyssa, 1968, p. 85.

14. St. Basil the Great, 1845, p. 40.

15. *Ibid.*, p. 34.

16. Athenagoras of Athens. *On the Resurrection of the Dead*, 1867, p. 141.

17. St. Basil the Great, 1845, p. 41-2.

18. See: Chubinashvili, 1948; Tokarskii, 1961; Kleinbauer, 1973, pp. 89-114; Kleinbauer, 1972, pp. 245-62; *Tocharidou*,

19. See more about the Church of St. Titus in: *Gerola*, 1908, p. 29; *Krieta*, 1990, p. 858-9; Tsougarakis, 1996, pp. 17-8;

of large cities became an archaic rather than progressive factor²⁰. The provincial type of a domed cross-in-square church became common, as exemplified by the church of Buyuk ada outside Amasra (early 8th c.), the Ereğli cathedral (Sea of Marmara coast, 9th c.), and the cross-in-square and domed cross-in-square churches of Chersonesus of the 9th - 10th centuries.

The artistic character of temples changed. The mass of the buildings became more tangible, with the former visually thin shell giving way to a column or wall structure in a complex spatial composition. Open vistas were replaced by a shut-off ambience and the feeling of the isolated congregation, and, in the absence of luminous solemnity and evenly spread lighting, light contrasts produced a special impression in the generally dark interiors. The buildings became pointedly sacral in their expressiveness.

In itself the active construction of domed cross-in-square churches shows that clients and architects consistently preferred them to other architectural types. In these temples there formed a three-part and, as the most common variant, three-apse structure of the altar space to match the growing role of proskomide (offertory) in liturgy, which required that the prothesis and vestry be placed next to the main altar. However, the altars of all the other types of churches also underwent that change. It is hard to surmise that some functional considerations might have underpinned the prestige of domed cross-in-square churches. Compared to basilicas, they are even less comfortable due to their reduced overall size and the lack of room for processions or processional entrance.

In Byzantine history the 8th and 9th centuries saw not only unfavourable economical and political circumstances, but also fierce theological debates and iconoclasm, which considerably affected art. Icons as holy images became a direct object of debate, and the time was often perilous for their existence. Nevertheless, the conflicts triggered intense re-thinking of not only spiritual concepts, but also of the meaning of religious rituals and the interpretation of cathedral space. The opposition of the invisible (true) and the visible (transient) world was elaborated, enriched and overcome through a search of the connection between the two, the reflection and revelation of the divine nature in earthly events and things. Byzantine art exploited the ability of a work of art to convey the beauty of the ideal world (prototype) in visual form with rare insight and stunning plastic conviction.

Let us try and single out from the general system of Eastern Christian world outlook of the 6th-7th centuries the ideas which proved decisive in making the domed cross-in-square church nearly the obligatory canonical type of the church building in 9th- and 10th-century Byzantium.

Christian cosmos consists of two worlds, one heavenly and the other earthly. All elements of the two worlds are assigned a certain order depending on the extent to which divine energies are manifested in them, that is, form hierarchies. The earthly hierarchy is subordinate to the heavenly one. The highest ranks of the former lead up to the lower ranks of the latter. The world is essentially spiritual, but the essence of phenomena is hidden under their material outer aspect from the lower hierarchy, to which humans belong. Transition to a higher hierarchy is only possible because the material world is built in accordance with the same laws as the spiritual world and is connected with it by the common incarnation of divine energies. This connection is effective to such an extent that by observing the world one can discover its hidden meaning.

The big role assigned to visual contemplation in learning about the world was, of course, the result of the millennium-long flourishing of culture in Antiquity, which made first-grade works of art part and parcel of the everyday life of virtually all social strata. Sophisticated ancient and early Byzantine artistic perception was the source of the aesthetic aspect of religious experience. Byzantine art never treated problems of artistic perfection as purely formal. Poor works of art would have been dead idols unfit to serve as icons, images of the divine. For Christians church rituals encapsulated sacral values accessible to man in this world, and liturgy brought the believers into closest contact with God. The mystic liturgical rites and their order were seen as the "celebration of the heavenly"²¹.

Liturgy was done in the temple, the symbolical meaning of which was interpreted in multifarious ways in writings by the theological authorities of the 6th and 7th centuries. According to St. Maximus the Confessor²²: The church is a divine house where the mystical life-giving sacrifice is made...²³.

Diverse interpretations have forever been characteristic of Christianity, yet the idea of the church as a microcosm uniting two spheres – the heavenly and the earthly – or, in other words,

"the church as heaven on earth" gained special importance in the 7th–9th centuries. This explains the urge to arrive at accomplished compositions and a synthesis of artistic ideas.

Church architecture was seen as "the image of the hidden beauty" while "the ranks of order on earth" were to reflect "the Divine Concord and the disposition of the Heavenly Orders"²⁴. Supreme (celestial) beauty was seen as "being unific, good and the source of all perfection" and was "wholly free from variety"²⁵ because it was associated with the essence "of the single type, qualityless, peaceful without contrarinesses"²⁶ which "allows for no enlargement or change. Everything that is beautiful and good is always mentally represented in the truth of the beautiful"²⁷. "Truth is something simple, only and singular, the same and indivisible, immutable, passionless, immune to oblivion, and free from any defect"²⁸.

These definitions of the theologians are nearly negative and seem to offer little trace capable of leading to an aesthetic judgement. And yet we can get an idea of such judgement from definitions of the beauty of the highest rank of contemplation, including simplicity, integrity, immobility, withdrawal from all sorts of qualities of every living thing, and freedom from diversity and complexity. These words can hardly apply to Byzantine churches of the 6th century: landmarks of the Justinian era bear an imprint of a complicated mix of traditions and intense architectural thinking. Their big size presupposes large congregations; their division into the choir, nave and aisles is largely indicative of the real, earthly organisation of the believers.

With its clear-cut central plan the domed cross-in-square church proved to correspond to the ideas, such as "integral", "simple", "peaceful without contrarinesses", "free from any defect", "devoid of multiplicity and movement" and "steadfast and immovable firmness". The dome was associated with the heavenly world while the cross vaults connected cosmos with the drama and triumph of Christianity. The movement of the curvilinear surfaces around the centre transformed the temple into a unifying, blessing and hallowing cover. The concept of an enclosing domed canopy – the fundamental idea of entire Byzantine architecture – found its fullest and most consistent expression in the structure of domed cross-in-square churches.

Such churches served as a model for the construction boom in the period of the Byzantine revival in the 9th and 10th centuries. The empire fortified its borders, won back some of its former territories and stabilised its economy. Constantinople re-emerged as the centre of the development of arts to an even greater extent than before because the peripheral areas could no longer attain their former prosperity and activity. During the 9th through the 12th century over 100 churches were built in Constantinople²⁹. It was not so much a matter of quantity as that of the restoration of the sophisticated and luxurious style of court art of the pre-iconoclasm period, as a result of which the period was called the Macedonian Renaissance (after the name of the ruling dynasty).

Unfortunately, time did not spare the landmarks of the Byzantine capital and its environs. None of them has retained its image undisfigured, let alone undistorted. But a few structures have survived, with some of their main space, annexes, environment and, with rare exceptions, décor gone forever. Not a single fragment of painting has survived on the walls of the Constantinople monuments. However, contemporaries have left behind rapturous descriptions of new structures galore, giving us an idea of their former splendour.

In the time of Emperor Basil I (867-886) more than 30 churches were renovated in Constantinople and around it, and eight new ones were built next to the imperial palaces. The Nea, a new basilica consecrated in 880 at the Grand Imperial Palace, stood out from among them all. It was crowned by five domes covered with gilt copper. It must have been a cross-in-square structure with domes above the corner compartments and in this case must have served as an authoritative source of the five-domed church which was then copied repeatedly³⁰. Porticos adjoined the church on the north and south; the arches of the north portico were adorned with representations of saints. The upper gallery of the two-storey south portico was connected with the palace and the lower overlooked the sea. Between the porticos to the east of the church lay an inner garden known as *mesokēpion* ("middle garden"), closed-off on the east by premises for ball games³¹.

In front of the west entrance of the Nea there was an atrium, surrounded by porticos and decorated with two fountains of marble and porphyry. The floor was made of marble slabs, which were inlaid with mosaics and framed by representations

20. Similar processes in literature were wonderfully described by S.S. Averintsev: "The social and political

21. Writings of the Early Church Fathers, 1855, pp. 336-9, 363, 406-7.

22. St. Maximus the Confessor, 1855, pp. 300-18.

23. Germanus of Constantinople. "On the Divine Liturgy" dysinger.stjohnsem.edu/@texts/0720_germanus/02_

24. Dionysius the Areopagite, p. 5

25. Ibid., p. 15

26. St. Maximus the Confessor. On Love, ???

27. Gregory of Nyssa, p. 268

28. St. Maximus the Confessor. ???, 1855, p. 310

29. Ousterhout, 2000, p.241

30. Ćurčić, 1980. R. Krautheimer and C. Mango classify it rather as a four-columned temple and trace to it the

31. Maguire. 2000, p. 258; C. Mango. *The Art of the Byzantine Empire*. 1972, p. 163.

of animals and geometrical ornaments of silver and niello. The walls were faced with multicoloured marble. The sanctuary screen columns and vases were made of silver; the silver architrave decorated with gold, precious stones and enamel icons. The Holy Table was lined with silver with borders and representations of gold, gems and pearls³². The hagiography of Basil I, compiled in the 10th century, likened this church to a bride “adorned with pearls and gold, with gleaming silver”³³.

The choice of the domed cross-in-square structure with columns for the main supports as the most common compositional church system matched its precious and elegant style. As has been noted above, four-columned churches appeared as early as the 7th and 8th centuries, but it was only in the 10th-century Constantinople that the artistic taste of the period chose them as its most adequate expression. The first surviving example in the Byzantine capital is the northern church of the Lips Monastery (908) dedicated to the Mother of God³⁴. The substitution of columns for piers or walls supporting the vaults was a change of principle. Columns thus transformed from a decorative into the main structural element. The space of corner units merged with that of the arms of the cross, making the interior look like a hall.

It was no longer possible to have the choir inside the temple because its level would have crossed the columns³⁵ of Constantinople) the arcades bore the choir and formed part of the inner structure around the central space under the dome. Now the choir remained only above the narthex and the corner compartments, squeezed out to the level of the vaults and losing its former role in the temple. The triple arcades were moved away from the centre to the line of the outer walls and made higher to equal the central arcades³⁶. The use of columns fully opened the corner (including east) units, resulting in the need to have ancillary altar premises, and this is why the metropolitan temples are nearly always a cell longer and categorized as of the complex type.

The main levels were marked by carved marble cornices spanning the entire structure and all the annexes. The first cornice ran at the level of the base of the arches and vaults above the narthex, the capitals of the central columns and triple arcade stubs in the arms of the cross, and the central apse window. The second marked the level of the central vaults and the third adorned the base of the dome. Of the three chords corresponding to the above division, the main columns determined the height of the first cornice and the vault of the narthex that of the second, as a result of which the smaller arches and those of the decorative arcades were elongated. The main divisions of the interior were projected onto the façades, thus determining their composition.

The multitude of large windows on all sides and in all tiers evenly flooded the temple with abundant light. The structure of those windows – with the inclusion of marble stubs and slabs – was highly traditional for Constantinople. Such windows have survived in the Hagia Sophia and were apparently known in palatine architecture.

The combined space of the interior, the clear-cut system of vertical structure and the absolute centrality of the naos brought the entire composition together, making it a single and integral whole. That wholeness did not come as a result of oversimplification. The small space of the naos was spanned by nine vaults and eight arches placed at three levels. Different in scale, they were interrelated constructively and aesthetically. Owing to that system space remained complex and multifarious despite its hall-like nature. N. Mavrodinov gave a brilliant description of the expressive interiors of such structures: “In Byzantine architecture spatial forms are determined by vaults, domes, walls, openings and so on. These architectural elements organise space and with their surfaces give the final touch to its shapes, determining its width and depth; they soften its outlines, making it flexible, and dissect it into smaller shapes, each with its own beauty, character and atmosphere”³⁷.

It may seem that columns as the main and only supports in the centre of the naos should visually emphasise the structured nature and commensurability of the entire organism. However, the striving after a flexible dematerialised form has the upper hand here. The columns mask and diminish the scale because they are removed from the vaults by light arches. The rhythmic movement of the vaults and arches connects the vaulted “heavens” spread above the temple with the capitals of the central polished columns. Their mirror-like surface makes the supports structureless, while the illusory play of reflections conceals the constructive logic.

The central space is organised as a single whole in a special way. The relationship between spatial zones and the outlines

of arches and vaults becomes of decisive importance. The central dome with its circular cornice is a source of rhythmic movement flowing on evenly and regularly downwards and sideways. The Greek were well aware of the concerted movement of curvilinear outlines and went into raptures over it³⁸. Patriarch Photius mentioned it in the 9th century when describing the Church of the Virgin of the Pharos in the Grand Palace of Constantinople: “... it seems that everything is in ecstatic motion, and the church itself is circling round. For the spectator, through his whirling about in all directions and being constantly astir, which he is forced to experience by the variegated spectacle on all sides, imagines that his personal own is transferred to the object”³⁹.

A modern person can find such a close link between vision and personal experience somewhat far-fetched. Yet, it indeed corresponds to specific visual perception that existed in Antiquity and Byzantium. Active perception of the world was a legacy of the ancient concept according to which the eye is not a receptor but a source emitting rays that, as it were, probe objects and connect the viewer not only with their outward appearance, but also with their essence⁴⁰. The energy-intensive process is an earnest of the active participation of man’s inner forces in world perception and interpretation. Visual contact with even remote objects or representations, as it were, transports them into everybody’s private world, transforming into a communion and intimate unity. This connection between inward and outward contemplation becomes possible and inherently rich, particularly in art.

According to Photius, vision has an incomparable ability to connect man with the essence of things. “... the comprehension that comes about through sight is shown in very fact to be far superior to the learning that penetrates through the ears..., having somehow through the outpouring and effluence of the optical rays touched and encompassed the object, it too sends the essence of the thing seen on to the mind, letting it to be conveyed from there to the memory for the concentration of unflinching knowledge”⁴¹.

In his time O. Wulff made a perspicacious observation about the peculiar perception of space in Byzantine churches⁴². All but the main point is that, after entering the church and making a few steps, the person stops because nothing induces him to take any real action. His sight alone becomes involved into the endless movement of curvilinear shapes and surfaces going along the vertical line (beyond the reach of actual movement). Transition to contemplation is precisely the essential aspect of Byzantine religious experience. Supreme truth attained through such contemplation should be simple, one and only, indivisible, immutable and unimpassioned, immune to oblivion and free from any flaw.

In accordance with this ideal, architectural thinking of medieval Byzantium sought to create an accomplished centrally-planned space, a complex structure functionally coordinated so that its every part seemed to exercise no pressure, nor experience any. “Byzantine aesthetics sought to avoid the accidental, to spurn the instantaneous in order to retain only the typical and lasting. To let these special qualities, so precious from the point of view of the believers because they come close to the immutability of God, be felt, that art cultivated a free rhythm with regular repeats, a broad free line, calm symmetry, equilibrium that precluded conflicting aspirations”⁴³. Such an attitude to artistic form was a millennium-long tradition for the Byzantines. That was, of course, the renewal of ideas, if only manifested in a different art⁴⁴.

The weighted regularity of constructing form deprived it of any patently expressive function. The mind controlled emotional expression just as in classical Greek art. “Byzantine art never grimaces, and it is little capable of instilling fear, just as of making one laugh. It is essentially serious and free from any noisy manifestation, passion or stormy emotion. It stays true to this state with that same firmness which is the cause of its grandeur”⁴⁵.

The distinctive impassiveness of Byzantine art is its highest accomplishment in conveying the ideal (of supersensual being of the heavenly world). This art is highly intellectual. The flight and soaring of thought, oblivious of earthly cares, is the state of spiritual contemplation so much valued by the Byzantines. Another important thing is that awareness of the ideal was seen as the coming out of inner spiritual forces, as a contact with that which existed objectively, rather than as a poetical product of the soul wrapped in itself. What the believers were looking for “was not some special state, but objective communion, the manifestations of which – heart fever, mirth and the feeling of fullness – were real, but significantly different from usual emotional states attending them because they evidenced the actual presence of the

32. Kondakov, 1886, p. 60-2; C. Mango, *The Art of the Byzantine Empire*, 1972, pp. 194-5.

33. C. Mango, *The Art of the Byzantine Empire*, 1972, p. 194.

34. Millingen, 1912, pp. 122-37; Ebersolt, Thiers, 1913, pp. 211-23. Pl. XLIX-LII; Brunov, 1926/2, pp. 217-36;

35. Already A. van Millingen noted that (see: Millingen, 1912, p. 14).

36. R. Krautheimer and C. Mango described the four-columned type of temple as that of the inscribed cross (Krautheimer, 1936, p. 257).

37. For example, St. John Damascene defined mathematics as follows: “Mathematics is knowledge of what is in itself”

38. The Homilies of Photius Patriarch of Constantinople. English translation, introduction and commentary by Cyril

39. caused it to flow through the eyes... Accordingly, whenever there is daylight round about, the visual current issues forth,

40. The Homilies of Photius Patriarch of Constantinople. English translation, introduction and commentary by Cyril

41. Wulff, 1929-1930, pp. 531-9.

42. Grabar, 1963/1, p. 55.

43. (Michelis, 1959, p. 274)

44. (Michelis, 1959, p. 274)

Divine Principle⁴⁶.

Church architecture was to provide a wonderfully unambiguous frame to Communion and to reflect Divine Beauty (see note 34). As Photius wrote about the Church of the Virgin of the Pharos, "...when... one looked into the church itself, with what joy and trepidation and astonishment is one filled! It is as if one had entered heaven itself with no one barring the way from any side, and was illuminated by the beauty in all forms shining all around like so many stars, so is one utterly amazed"⁴⁷.

The church of the Mother of God of the Lips Monastery was barbarously disfigured in the 16th-17th centuries, when four marble columns were broken and replaced with coarse arches and the wall and vault decoration was scraped off. However, the surviving main structure make it possible to see clearly what contemporaries ecstatically wrote about.

The columns have been broken in all the extant churches of Constantinople of the 10th-12th centuries. Only one remarkable four-columned church connected with Constantinople has survived – the Church of the Mother of God (Panagia) at the Hosios Loukas Monastery in Focide, dating approximately from the mid-10th century – and it gives a full idea of this perfect and expressive spatial composition.

Monumental Byzantine art is usually thought to have assigned a secondary role to sculpture. This is apparently true as far as round sculpture is concerned, but the corpus of surviving fragments of carvings, remarkable in both diversity and perfection, associated with the Church of the Mother of God of the Lips Monastery warrants recognition that carved and relief decoration played a significant part in the interiors and façades of the churches of the capital cities. The church has some re-used details, such as naos lesene capitals dating from the 5th century. However, the rest forms an original system evolved specially for the given monument⁴⁸.

The cornices were assigned the leading role. The first, with the largest projection and the most nearly horizontal lower surface, was at the base of the central dome. Six representations of eagles divide it into segments with large rosettes in the middle (apparently, six windows were cut in the dome). The remaining surface was adorned with compositions of big fantastic flowers separated by palmettes, with a row of dentils and palmettes below.

The next cornice marked the base of the central vaults and apse conches and spanned the middle cruciform space; it was less projected and had the ornamented surface that was closer to the vertical. A zigzag line formed the keynote of the ornament, dividing the cornice band into triangles filled to capacity with wondrous palmettes, stars and flowers. Each of the indents along the wall was also decorated with a palmette. At the centre of the apse and the arms of the cross the cornice ornament was broken by a cross in a wreath with figures of peacocks placed symmetrically on the sides.

The third cornice ran along the walls at the level of the capitals of the central columns and stubs of the triple arcades. Alternating crosses and palmettes formed a flowing ornament that has retained some colouring – the pattern was red and the ground blue. The cornice was slightly projected and its surface was closest to the vertical. The different incline of the ornamented surfaces was, beyond doubt, intended to make them more visible. The butt ends of the marble stubs, their bases and capitals were richly carved. Even the marble slabs lining the walls were similarly decorated, as evidenced by the surviving fragment in the parabema.

Excavations of the church floor have yielded fragments of marble intarsia panels, including a fully intact representation of St. Eudocia (coloured marble and cast glass). An even more surprising discovery was the sophisticated ceramic decoration of rectangular tiles with yellow, dark green, turquoise and black slips, with the geometrical ornament and rosettes done in black. The church may well have had ceramic icons either inserted in the walls and arks or forming part of the sanctuary screen. One fragment – a piece of a convex belt – makes it possible to reconstruct it as part of a horizontal band adjoining the lower cornice⁴⁹.

All church adornments were full of symbolical meaning, even the marble floor intarsia had its own interpretation. It was either a paradise meadow with flowers or an ocean washing the earth, and broad undulating ribbons of the pattern were associated with the Jordan⁵⁰.

The church is full of light coming through the huge windows which occupied virtually the entire wall surfaces between the lesenes. The butt ends of the north and south arms of the cross were especially glowing with light where the triple window with

marble treillage and stubs and the semicircular triple window above completely replaced the walls.

Such pieces of architecture, ideally balanced and richly decorated⁵¹, created a liturgical environment brimming with radiance and the beauty of the celestial world. However, in the eyes of the believers that cosmos would have been flawed and unworthy of its purpose had it not had sacred representations⁵². The anthropomorphism of Byzantine painting which accorded pride of place to man and God-man, was of course a precious legacy of Antiquity culture. But it was precisely in the period of struggle against the iconoclasts that profound Christian interpretation was associated with icons as evidence of the true incarnation of Christ and a crucial go-between for believers and God.

Architecture provided ideal conditions for arranging images in vertical zones in keeping with their sacred meaning. The dome and the dome drum, pendentives, central and corner vaults, apse conches and arches all had their own parts to play in the symbolical interpretation of the building with the help of painting. Soteriological representations found expression in the figures of saints and martyrs and culminated in the cosmic image of Pantocrator.

The very system of painting graphically demonstrates that the temple was interpreted as a microcosm: "...temple architecture determines the topographical structure of the church, while mural painting reflects the composition and hierarchy of society that is the church starting with God and ending with the multitude of His loyal subjects⁵³. The spatial arrangement of images in church interiors served to create a ritual space that fused inseparably the past, the present and the future⁵⁴.

Only bearing in mind the above brief survey of the evolution of ideas and architectural forms can we understand the creative background and world outlook of the Byzantine architects invited by Grand Prince Vladimir to build the first stone ensemble of palaces and the church of the Mother of God in Rus'. A few preliminary remarks on the specificity of the Kiev genre, clients and commission with respect to Constantinople will be pertinent here. In addition to palaces, the fairly extensive construction practice in Constantinople of the 10th-11th centuries was connected with the building of small churches. It is difficult to assess them with a high degree of certainty due to their poor survival. Yet, regular churches had domes with a diameter ranging from 3 m to 5 m, while the church of St. George of the Mangana, which seemed to Michael Psellus who witnessed its construction in the 11th century so huge⁵⁵, was 21.5 x 21.5 metres⁵⁶.

Imperial construction projects, of course, featured prominently, however, many churches and monasteries were built on private commissions and accounted for the period's general idea of scale. The Macedonian dynasty inherited the imposing structures which stunned the imagination of all guests of Constantinople from the pre-iconoclastic period. They were restored, adorned with mosaics (the Church of the Holy Apostles) and rebuilt after strong earthquakes (Hagia Sophia), however, the secular and church life environment of the vast imperial palace created between the 4th and 7th centuries had no need for new structures, and there was not always enough money to maintain the old ones⁵⁷.

The situation with the Kievan construction project was altogether different. To begin with, the Grand Prince commissioned to build a cathedral to give the believers a place of worship and also to serve as a model and symbol of the profound and true faith for the neophytes. These included thousands of commoners and his hundreds-strong retinue made up of his *druzhina* and old noblemen. A bronze quadriga brought from Chersonesus was put up behind the church (according to the chronicle)⁵⁸, and the square thus formed was enclosed with stone palaces. The entire ensemble marked the transfer of Kiev's administrative and sacral centre from Podol uphill, where the city cemetery used to be in the past. That was the first princely city – the city of Vladimir – which launched the development of the upper Kiev in the 11th century and was carried on by the cities of Yaroslav the Wise and Iziaslav. The Tithe Church built in A.D. 989 from the outset became the city dominant in the Dniepre panorama, no less significant for the Kiev landscape than the Hagia Sophia was for the Byzantine capital. Prince Vladimir assigned a tithe, a tenth of his income, for its upkeep and thus determined its secular name.

The Tithe Church stood in all its beauty for nearly two and a half centuries, until it was nearly fully destroyed in 1240 after Batu Khan had seized Kiev⁵⁹. Archaeological research of the

46. Meyendorff, 1959, p. 71.

47. The Homilies of Photius Patriarch of Constantinople. English translation, introduction and commentary by Cyril

48. Macridy, 1964, pp. 253-78; Mango, Hawkins, 1964, pp. 299-315.

49. Ceramic decoration appeared in Constantinople and spread to centres connected with it (especially in Bulgaria) in the

50. Janin, 1953, p. 454; St. Procopius of Caesarea, 1939, p. 211; Mango, Parker, 1960, pp. 239-40.

51. For the conclusive description of Byzantine church decoration of the 9th-10th cc. see: Mango, M., 2001, p. 9.

52. That is why for Photius even a church like the Hagia Sophia of Constantinople was inadequate after the icono

53. Grabar, 1957, p. 234.

54. See: Ousterhout, 1995, p. 76; Webb, 1999, pp. 71-2.

55. "Whoever scolds the temple for its size falls silent dazzled by its beauty of which there is enough for every part of this

56. Mango, M., 2001, p. 8

57. The 10th-c. Byzantine budget did not exceed one-seventh of the caliphate's budget, while in the 11th c. the patriarchate

58. The Tale of Bygone Years, 1997, p.160.

59. On its ruins a small church appeared in the 17th c. and was replaced by a new huge cathedral on orders of Nicho

early 20th century and in the 1930s made it possible to amass valuable information shedding light on the architectural forms of the original structure⁶⁰.

The church plan was reconstructed by the outlines of the foundation ditches and only to a little extent by the remaining walls (in the southwestern part of the building). What leaps to the eye is the intricacy of the plan and the large scale of the composition – the church was approximately 40 m long and 36 m wide. The domed cross-in-square structure with a nave, two aisles and three apses is clearly seen in plan. The general symmetry of the annexes makes them look like galleries, most likely built originally, or perhaps rebuilt and supplemented with the second floor in 1039⁶¹.

Horizontal parallel sleepers filled with mortar and reinforced with vertical wooden pegs were laid in the foundation. Opus signinum was added to mortar, giving it a rosy colour. In the beginning the (ceramic) filling was made specially along with plinthiform brick, but then broken bricks were used. Kilns were set up next to the construction site. Such methods of laying the foundation and organising production were traditional for Byzantium and are largely traced back to Antiquity⁶². Imported to the Dniepre banks, they attested to the involvement of Greek master builders, as is fully corroborated by the chronicle report.

The walls and vaults of the Tith Church were made of brick and opus signinum mortar. Together with limestone, brick (3 to 5 cm-thick square ceramic slab with a side 35-39 cm-long) was the main building material in late Antiquity and Byzantine architecture. Its 3 cm-thickness distinguished plinthiform brick from contemporaneous Constantinople structures (usually 4-5 cm-thick) and subsequent Kiev construction projects of the 11th century. However, this distinction is inconsequential and lies within the general technological tradition. All the more so since the Tith Church masonry has yet another distinguishing feature that makes it possible to speak of the Constantinople tradition.

I mean here the so-called “recessed brick” or “concealed course” technique. Courses of bricks alternated with rows of mortar of the same thickness, with every following course of bricks recessed into the wall by 3-5 cm and concealed by a broad band of mortar. That technique was characteristic of precisely Constantinople and preponderated in Kiev and Constantinople in the 11th century in forms so closely related that it is at times impossible to tell one from the other by photographed details⁶³.

Another distinguishing feature of the Tith Church masonry is the use of stone alongside bricks. This technique was known in Byzantium under the name of opus mixtum. In Byzantium courses of bricks alternated with those of ashlar, while in Kiev unworked stone (granite, quartzite, sometimes fairly large boulders) was used. Such stone jutted out of the façade surface and usually also formed horizontal courses. The gaps between stones were floated with opus signinum and often outlined with a sharp instrument (*grafija*) or impressed with rope to form rectangles, transforming stone masonry, as it were, into that of rectangular blocks.

The above technical features, beyond doubt, bespeak the Constantinople origin of the architects who built the first church in Kiev. This fact also accounts for the main composition of the building, although to understand the situation we have to get a broader picture of Constantinople’s architectural tradition. This need has to do with the size and the complex structure of the building. Despite the fact that four-columned churches preponderated in Constantinople of the 10th century, no researcher has ever suggested that option when reconstructing the Tith Church, which is bigger and more complex than those structures. Its area is twice the size of the Church of St. George of the Mangana. The foreign master builders were hardly experienced in building such structures, so the idea at the heart of the construction project was unlikely to have come from them. The scale of the commission was set by the will of the client – Grand Prince Vladimir of Kiev, who was guided by the grand landmarks of imperial Constantinople which had been built three or four centuries earlier but forever remained the most venerated by the Byzantines and guests of their capital. They were the Hagia Sophia, the Hagia Irene, the Church of the Holy Apostles and the Grand Palace churches.

Let us sum up the details enabling certain assumptions about the vertical structure of the Tith Church. Of paramount importance is the invaluable evidence of the *List of Russian Cities* that the church was crowned with 25 domes⁶⁴. For all its worth, this big number suggests that it must have been a five-domed or even seven-domed church. The annex domes indicate that the structure must have had two floors, otherwise this number of domes above one-storey buildings would have hidden from view the façades of the main part.

The surviving 19th-century drawing of the church ruins is convincing evidence of the height of the two-storey galleries⁶⁵. Although the drawing is far from exactly informative, the inter-floor cornices and the two tiers of windows in the gallery walls and the main part of the building suggest that the structure had two storeys. The desire to have a spacious second floor, the choir, in imitation of a similar grand space of the major Constantinople churches was the chief reason for numerous domes that flooded every cell of the choir with light.

The south and west galleries were open ground-floor arcades⁶⁶. The finding of a part of the gable top in the form of six courses of bricks lying along the circumference with a surviving course of indents between them was important for the reconstruction of the gallery apex⁶⁷. The developed form and the surviving huge tiles of the upper course proved that the fragment formed part of the gable frame (precisely of the second storey as one-storey galleries usually had a horizontal top).

The possible diameter of the gable ranges between 4 and 5 metres: the fragment is quite deformed by being straightened out, which makes the smaller size more probable (the central part of the west façade is about 7.5 m wide, and the smaller parts 4 m to 5 m wide). If the fragment was indeed of the smaller part, the galleries were topped with gables along the entire perimeter.

It is not known how the church walls were topped. In Byzantine architecture the central gables were usually accompanied by straight lines topping off the corner compartments. The Tith Church might have been topped off in the same way; anyhow, structures closest to it in time were done in precisely this way.

S.R. Kilievich made a unique discovery when she found an imprint left in the ground by an adobe next to the kiln. It was a rectangle with two longitudinal parallel lines inside, looking like a schematic drawing of a structure with a wider central nave and two aisles. The aisles had semicircular tops, while the central nave had a gable formed by two lines meeting at an angle.

In her 1982 paper Kilievich interpreted that drawing as the church layout⁶⁸. However, her original point of view, which G.Iu. Ivakin supported and according to which the drawing was the church façade rather than the layout, seems more justified⁶⁹. The graphic fixation of the layout is a much more abstract and later method of “representing” the building. Furthermore, the layouts of 10th- and 11th-century churches always presuppose the presence of transversal lines. Besides, the apse form in the drawing has never been encountered anywhere else and is in fact impossible.

Gables in the middle part of the church were quite common in Byzantine architecture. In the Church of Panagia Chalkeon of Thessaloniki small walls rise above the semicircles of the central parts, corresponding to the lines of the main vaults, and form a decorative gable. Although the supposition that the Tith Church could have the same form is far from indisputable, the find made by Kilievich suggests that the possibility of other variants of architectural forms should be given thought. The complex and to a certain extent symmetrical layout of the west annexes prompts the conclusion about their special purpose. N.I. Brunov saw the close standing parallel walls on both sides of the central axis in front of the west façade as gently sloping staircase towers of sorts, or approach ramp. He also surmised that identical three-part palaces might have been set up in the west corners of the building⁷⁰. There is hardly any ground for that, and a different explanation is also possible. Symmetrical annexes may have existed there – then the overall composition of the church, annexes and galleries would be similar to the Katholicon (the diocese cathedral) of the Great Lavra monastery on Mount Athos (the last third of the 10th century).

Let us go back to the many domes of the church. Their number suggests that they were raised above every compartment of the choir on the second floor with the exception of the central space under the dome. There is no doubt that the choir was in the western part of the building, extended above all the annexes on the west side, and went on eastwards above the aisles. However, the crucial question is how far they extended, that is, whether they occupied only the west corner premises of the naos, crossed the north and south arms of the cross, or else were set up in side altar space.

The marble capital of the Tith Church supported a rectangular masonry block (100 x 74 cm), which certainly evidences its use in the triple-column arcade – a favourite motif of Byzantine architecture⁷¹. Such arcades were frequently set up in the arms of the cross to support the choir. D.I. Mileev also found in the course of digs two fragments of a square pier with semicircular moulding along the edges. Remains of an octagonal pier of the

60. The church was excavated by D.V. Mileev (the north gallery and apses in 1908) and by M.K. Karger (the rest of it in

61. M.K. Karger was of that opinion, connecting that reconstruction with the chronicle report about the

62. The article written by H. Schaeffer, who pinpointed the striking similarity of construction technology of

63. Course masonry of brick preponderated in Constantinople in the 10th c. For a long time the Church of St. George of

64. Tikhomirov, 1952, pp. 218-9.

65. *Ibid.*, pp. 53-4, fig. 16. The find evidences that the galleries were roofed with tiles, although the main part was

66. Kilievich, 1982, pp. 41-2.

67. *Кілієвич*, 1979, p. 17; Kilievich, 1981, pp. 340-2.

68. Brunov, 1953, p. 300. Approach ramps were common in Roman and Byzantine architecture – suffice it to

69. *A Lost Art Rediscovered*, 2001, pp. 13-42; Ivakin, 1979, pp. 121-3; Ivakin, Putsko, 1980, pp. 293-9.

Tithe Church have been discovered recently⁷². Such supports, too, may have formed part of the triple arcade. It can be surmised with a high degree of probability that arcades were used to set up a gallery in the side arms of the cross of the Tithe Church, while the definition of supports attests to the possible use of arcades also in the upper tier. The similar composition of the Cathedral of the Transfiguration in Chernigov will also have to do with the intentional copying of the Kiev example (the Kiev marble capital is extremely similar to those of Chernigov in shape and size).

What has thus transpired is enough to try and find parallels in the range of forms of the Byzantine architectural tradition. The church of the Alahan Monastery of the second half of the 5th century, in which the desire to combine the basilica (with a nave and two aisles) with the dome resulted in the enlarged middle compartment and the appearance of two-tier triple arcades between the main piers⁷³. Half a century later a similar solution, already in a developed variety of Constantinople, can be seen in the church of Qasr Ibn Wardan⁷⁴.

In different varieties the composition of domed cross-in-square space with arcades in the arms of the cross continued to be topical during the construction of churches and cathedrals from the 6th to the 10th century, including the Church of Virgin Mary in Ephesus, the Church of the Dormition of Nicaea, the Church of St. Clement in Ankara, the Hagia Sophia of Thessaloniki and the Little Hagia Sophia of Vize⁷⁵.

Around A.D. 900 a church was built in Dereāġzi (Antalya) not far from ancient Myra of Lycia. Although it is not known for certain who it was dedicated to or what its purpose was, it is of crucial importance to the understanding of the genesis of the Tithe Church. It stood far away from Constantinople, but was close to Myra, the centre of the veneration of St. Nicholas, and its remarkably sophisticated architectural forms and construction technique place it within the mainstream of Byzantine art.

In plan and even size it is a prototype of the Tithe Church. The domed cross-in-square church with a nave and two aisles had a developed two-storey west part – a narthex with the adjoining square staircase towers, an exonarthex of complex rhythm (a two-tier portico of sorts), and the choir above the aisles stretching throughout their extension up to the east walls. The triple arcades supported the choir crossing the north and south arms of the cross, and the west arm was open: the gallery above the narthex opened onto it with an arch (a doorway connected the narthex with the church on the ground floor). The Dereāġzi church was 33 m long (without the exonarthex) and 21 m wide, and the Tithe Church 28 m long and 18 m wide, with the square space under the dome a little over 8 m in the former and 7.75 m in the latter.

The Dereāġzi church makes it possible to imagine the structure of the Tithe Church with a large degree of probability. Guided by other considerations, that is, exact and in-depth knowledge of a later Russian landmark – the Cathedral of the Transfiguration of Chernigov – N.V. Kholostenko arrived at similar reconstruction⁷⁶. Yet another question about the Tithe Church structure can hardly be resolved unless we address Russian structures of the first half of the 11th century. Namely, did it have two-tier arcades or only those under the choir?

The Dereāġzi church had only ground-floor arcades and for this reason could hardly serve as a model for two-tier compositions. However, in Russian churches two-tier arcades were a must in every structure dating from the first half of the 11th century – the Cathedral of the Transfiguration of Chernigov and the St. Sophia cathedrals of Kiev, Novgorod and Polotsk, which are the most likely evidence of the same structure of the earliest Russian church. In all likelihood the Tithe Church was the source of the compositional scheme for later construction projects⁷⁷.

Written evidence and the general historical situation make it possible to specify the genesis of the first Russian church concept. Although it was the first church in Kiev, it was not a common city centre, but a palatine church of Vladimir Sviatoslavich, as A. Poppe showed convincingly⁷⁸. The palace ensemble was in front of its west façade.

The church was dedicated to the Mother of God rather than to any of Her festivals in particular (e.g., the Dormition), and it is not by chance that this is how the chronicles refer to it. The palace church dedicated to the Mother of God has a parallel in the 10th-century Grand Imperial Palace of Byzantium, where the Church of the Virgin of the Pharos (next to the lighthouse) situated next to the chambers and the Chrysotriklinos served as the domestic church (whose enthusiastic description by Patriarch Photius has been cited above). It was built by Basil I in the second half of the 9th century. C. Mango and R. Jenkins have reconstructed

it as having triple two-tier arcades and, consequently, a fairly developed gallery, proceeding from the description left by Photius and its kinship with the Church of St. Clement in Ankara⁷⁹. If this is the case, walls or piers rather than columns should have served as its main dome supports. Then the replication of a similar composition in the Tithe Church is of paramount conceptual importance.

It can be surmised that when Vladimir Sviatoslavich summoned architects from Constantinople to erect a palace church (which was facilitated by the fact that his wife Anna was Byzantine Emperor Basil II's sister), the church dedication and major structural features were chosen under the influence of Constantinople customs and the Grand Princess. The church composition seems to resemble more the Dereāġzi church than the Church of St. Clement in Ankara. The two types are very close though; besides, the open form of the west arm of the cross made the Russian churches akin to the Dereāġzi church, while the upper-floor arcades were characteristic of precisely the Church of St. Clement. The features of both types merged there and might have also been shared by the Church of the Virgin of the Pharos.

The Tithe Church was one of the mainstream phenomena of Byzantine metropolitan architecture. Although we know next to nothing about its décor, in techniques and style it was, most likely, akin to the wonderful structures of Constantinople. An extant fragment of the floor – an omphalos (navel), a circle inscribed in a rectangle) is done in marble opus sectile, the precious technique of marble inlay on stone slabs. The same technique was used in another fragment in the form of a band. Excavations yielded a lot of white marble, slate and glazed ceramic tiles⁸⁰. They all must have been part of the decorative floor, although new discoveries of Byzantine landmarks suggest that earlier assumptions about the use of ceramics in wall decoration were not groundless⁸¹.

Broken pieces of marble slabs, cornices and capitals bring to mind the chronicler's description of a "marble" church, while fragments of frescoes and mosaics evidence that the church had an accomplished décor. It is impossible to reconstruct the entire system of the façade decoration of the Tithe Church, but it is nevertheless obvious that it was a fairly elaborate system. The walls were covered with two layers of plaster, which bore traces of paint and decorative painting⁸².

The Tithe Church became not only the dominant feature of new Kiev, inaugurating the development of the upper town and assigning it a leading position in the city panorama. It also was the epicenter of the architectural ensemble of the Grand Prince's palace complex. Excavations, mostly accidental, unearthed remnants of palaces around the church dating possibly likewise from the late 10th century, that is, the same time as the major construction project⁸³. All of them are rectangular structures about 10 m wide and dozens of metres long, crossed by walls into separate spacious premises. What has survived of the palaces is mostly foundation ditches and only sometimes the foundations proper, but their structure of parallel wooden bars and pegs, pebble filling and crushed pottery mortar (opus signinum) is similar to the construction method of the church itself. Fragments of thin yellow brick associated with those structures are also close in clay thickness and composition. Numerous fragments of plaster with fresco and mosaic decoration cannot be attributed without reservations to palace remains rather than to those of the huge building of the Tithe Church. However, the homogeneous finds make it possible to suppose that common techniques were employed in the decoration of all those structures.

Situated 60 m away from the west façade of the church, the palace was oriented almost parallel to that façade. There was a gallery along the façade overlooking the church (the palace was 52.8 x 17.6 m)⁸⁴. It can be surmised that that structure was the main one in the entire complex and that a ceremonial square was between it and the church on which there stood an equestrian group and sculptures brought by Vladimir from Chersonesus.

It is difficult to say anything definite about the architecture of palaces. At first sight they seem rather primitive. However, their distinctly rectangular layouts, scale and division into separate large premises with cross-beams enable certain conclusions. This type of a composition is uncharacteristic of wooden structures that are more often than not irregular and free in their layouts. Conversely, such structure is found in Byzantine palace complexes of different epochs – in Qasr Ibn Wardan (6th century), in the palace next to Mireleyon of the 10th-century Constantinople⁸⁵, in the 13th-century palace of the Laskarid Dynasty⁸⁶, and in Mystras (Mistra) and Constantinople (Tekfur Sarayı) of the 14th century⁸⁷. Such palaces are also known in Romanesque

70. Ivakin, 1979, pp. 120–1.

71. Forsyth, 1975, pp. 223–37; Krautheimer, 1986, pp. 245–7; Gough, 1985.

72. Butler, 1929, pp. 19; Lassus, 1947; Krautheimer, 1986, pp. 247–9; Mango, 1985, p. 151.

73. Peschlov, 1977; Hoermann, Keil, 1932; Restle, 1968, pp. 166–78; Schmit, 1927; Krautheimer, 1986, pp. 287–93;

74. Kholostenko, 1965, pp. 68–84.

75. Recent research has shown that the church known under the name of Atik Djami in Constantinople and dating

76. Poppe, 1976, pp. 197–244.

77. Jenkins, Mango, 1956, p. 173.

78. Ainalov, 1905, pp. 5–11; Karger, 1961, pp. 56–9.

79. See also note 60 and Schaeffer, 1973–1974, p. 210.

80. While trying to visualize the image of the Tithe Church on the basis of archaeological fragments, we can

81. Remnants of a structure unearthed north of the Tithe Church were thought to be the rotunda, a tower-cham

82. Kharlamov, 1995, pp. 185–90.

83. For information about the palaces of Qasr Ibn Wardan and Mireleyon see: Butler, 1929; Striker, 1981. Kharla

84. Buchwald, 1979, pp. 261–96.

85. Krautheimer, 1986, pp. 448–9. For palaces of Mistra also see: Chatzidakis, 2001, pp. 110–8.

architecture (Wartburg⁸⁸. The façades of those structures may have been decorated with arcades (Tekfur-Sarayi, Romanesque and Venice palaces). The number of floors in Kievan palaces is unknown, yet at any rate there must have been at least two – the upper floor could be made of stone or wood. At all events, the unearthed fragments of decoration bespeak the official nature of the interiors of those structures, in effect palaces.

Architecture of the early period of Kievan state history was that of significant projects of Byzantine and Romanesque art of the late 10th century. Poorly preserved written sources, to say nothing of lack of traces of any monuments, make it impossible to follow the development of the emergent architectural tradition in the subsequent period. The at least 20-year-long break in construction suggests that there were no major commissions and that the Greek master builders returned to Byzantium after building the Tithe Church and the princely palaces. Large-scale demand for houses of prayer in Rus' could be met by building wooden churches, of which we know next to nothing⁸⁹.

The following stage of large-scale construction in Kievan Rus is associated with the 1030s – 1050s, the time of Yaroslav the Wise. The opinion that the Cathedral of St. Sophia was built in Kiev not in 1037 – 1045 but a decade or even 25 years earlier seems a figment of imagination. The exposition below will show it to be groundless. We shall dwell on this issue when describing the Cathedral of St. Sophia.

The resumption of large-scale construction in Rus' had to do with Chernigov rather than Kiev. The Cathedral of the Transfiguration was founded on orders of Prince Mstislav Vladimirovich of Chernigov, who in the 1020s was as powerful as his brother Yaroslav, who held the Kievan throne⁹⁰. Anyhow, the division of Rus' lands between the two of them in 1026 was based on the goodwill and consent of Mstislav, who had scored a victory over the host of Yaroslav and the Novgorodians and could have secured undivided rule over Rus' for himself. When building the first and main cathedral in his capital, Mstislav naturally wanted its architecture to stress the vigorous rise of Chernigov as a new centre, which for a decade was on a par with Kiev.

Although we have no reports about Greek masters coming to Chernigov to build the Cathedral of the Transfiguration, its architectural forms and construction methods are convincing evidence to this effect, as was the case with the Tithe Church. The foundation structure, masonry technique and material, plinth and mortar all attest to it being the work of Byzantine master builders⁹¹. The church composition and decoration techniques also corroborate this conclusion. Any direct link between the builder teams is out of the question: forty years had elapsed and two generations came and went. For all its notable construction and artistic level, the Tithe Church did not entail the appearance of a stable tradition of local construction or the emergence of a school. The obvious link between the Cathedral of the Transfiguration and the Constantinople tradition can only be explained by another advent of Greek master builders.

However, the architectural situation of the 1030s already differed from that of the late 10th century. The ensemble of the Tithe Church defined the image of Kiev as the seat of the Grand Prince and his court, so the construction of the main cathedral of Chernigov was willy-nilly a competitive project. At all times competition with the famous models results in imitation, and now if Kievan masters and clients of the late 10th century looked for models in the Byzantine capital, the Tithe Church commissioned by Prince Vladimir became a model for imitation when the Cathedral of the Transfiguration was built by his son, Prince Mstislav. No written source discloses this situation, but the architecture of the Chernigov cathedral is indisputable evidence to this effect: the latter is so much like the Tithe Church that its explorer, N.V. Kholostenko, used it as the basis for the reconstruction of the former (see note 88). The domed cross-in-square cathedral with a nave and two aisles is practically equal to the Tithe Church in size. The rest of the vertical masonry is represented by centrally-planned cruciform piers, with arches springing from their lesenes and supporting the vaults.

The absent walls make the interior especially spacious, transparent and akin to four-columned compositions. Nothing of the kind existed even in the Dereagzi church, where all the small arches were cut in the tangible wall surfaces running along the spatial cross. Cruciform piers were to become typical of all Russian structures, and apparently this was also true of the Tithe Church.

Two-storey triple arcades built in the side arms of the cross in the Chernigov cathedral were prompted by the desire to provide the Prince with a spacious choir. A staircase leads to it from outside the cathedral, emphasising the differentiation and special

purpose of the upper floor. The choir above the narthex rests on vaults (flat-arched in the central part and cloister vaults in the side parts), in the naos the choir went on over the aisles laid on wooden boards up to the east pair of piers under the dome.

The two-tier lateral arcades stress the longitudinal aspect of space, which frequently prompts scholars to speak of the basilica-style nature of the cathedral and to see in this some special meaning or even the original design of the building as a basilica⁹². This two-tier nature is rather reminiscent of the Hagia Sophia, where the dome dominates and determines the entire space, and it plays the same role in the Chernigov cathedral.

Triple arcades that are very common in the architecture of Antiquity and Byzantium in themselves have an air of a ceremonial composition – it is not for nothing that they are akin to the triumphal arch composition. In Chernigov this aspect was expressed quite consciously in a subtle way. The middle arch of every arcade is slightly broader and higher than the lateral ones, which breaks the monotonous rhythm and produced a cross-arcade orientation. The shape of supports enhances this transverse movement. The slender ground-floor columns make the arcades utterly transparent⁹³, while the upper-floor columns are in the form of rectangles with their narrow sides projected into the dome space and, as it were, letting that space through them. The columns are made to look even narrower with the help of a trim strip that visually separates the side lesenes supporting the arches.

Vistas opening through the arcades make it possible to see a surprisingly rich variety of planes and rhythms in the interiors typical of the best of the Constantinople landmarks. They bring to mind prospects opening from the aisles of the Hagia Sophia, the Church of SS. Sergius and Bacchus, and most of all from the naves of the church in Qasr Ibn Wardan. The association with triumphal, ceremonial compositions, with gates, certainly derives from the idea of the triumph of both divine and earthly power brought together in Russian princely culture just as in the Byzantine Empire throughout its existence.

Not only did the upper-floor piers have the elongated rectangular shape, but also the ground-floor column capitals and imposts. This movement through the arcades makes the cruciform composition of naos space quite tangible. The orientation of the narrow sides of the supports to the viewer was highly typical of Byzantine architecture of all periods. While maintaining a sufficient area of support, it enables maximum transparency and immateriality of shapes.

There are even more exquisite ways of orienting the arcades to the arms of the cross. Revealing all the four wall arches above the arcades makes their rhythm even more tangible under the central dome, while the semicircular openings make it physically easier to fill in the lunettes and transform them from partitioning into penetrable elements.

The slight, almost imperceptible concavity of the upper-floor arcades is even more surprising, and it, too, promotes the feeling of the cruciform development of main space. The arcades adjoin the central piers, with the lateral arches starting from their lesenes and resting on the central piers. But the surfaces of these piers facing the dome space find themselves removed from the lesene line. Their front edges are decorated with semicircular moulding, and it is precisely by the projection of that moulding that the piers are removed from the general line of the wall and the lesenes, with the moulding resting on the resultant projection. This play of space is a characteristic technique of Byzantine art in which visual clarity and tectonic distinction (a legacy of distant Antiquity) are always complemented with an intuitive search for the irrational.

All the distinguishing features of the Chernigov cathedral structure considered above are akin and nearly similar to those of the Tithe Church and the Dereagzi church. The three landmarks are very close in size; we have already discussed the latter two, and the Chernigov cathedral is 32 m long and 21.5 m wide, with the square under the dome having a side of 7.75 m. There also are some distinctions. The Dereagzi church had no upper-floor (choir) arcades. Their actual presence in Chernigov and presumably in Kiev might have had to do with concrete models – the Hagia Sophia of Constantinople or the Church of the Virgin of the Pharos at the Grand Imperial Palace mentioned above – which bespeaks special ambitions of the clients and their commission.

At the same time there is a distinction between the Tithe Church and the Cathedral of the Transfiguration in the structure of the altar-space. In the Dereagzi church the choir runs throughout the length of the aisles. Apparently, the same was true of the

86. Hempel, 1930, pp. 305-6.

87. The newly found poorly legible remnants of a church at Podol bespeak a very simple shed-like composition of the

88. N. Makarenko started to explore the cathedral from the architectural and archaeological point of view in the

89. For more about construction techniques used in the Saviour Church compared with the Tithe Church see: apses,

90. Discourse about the basilica-style nature of the building arises from a

91. The columns of the Cathedral of the Transfiguration got their present look in the late 18th c., when their slender

Tithe Church, which had its altar-space next to the central square so the sanctuary screen was along the line of the east piers under the dome. The three parts of the sanctuary screen – the central one and those of the aisles – were not united visually (the same division of the central and lateral altar-space was characteristic of the Dereazhi church).

In the Chernigov cathedral the sanctuary screen is removed to the east by another transverse nave (compared with the Tithe Church)⁹⁴. The naos was an exact square, the choir ended by the east piers, behind which the aisles and the central nave merged. The central and lateral altar-space thus opened onto the naos for its entire length and the sanctuary screens merged into a single composition⁹⁵. This should be seen as the influence of the Constantinople four-columned churches in which the integral square space of the naos dictated a clear-cut integral construction of the altar-space.

The distinctly defined central units, covered by the vaults of the arms of the cross, are the distinguishing feature of the Cathedral of the Transfiguration choir structure. Opening onto the naos through the triple arcades (supported by octagonal piers in the west part) and flooded with light from six large windows, three in each of the two tiers (in the north and the south) and four more window openings in the west side, they form the main compartments. The lighting contrast makes this especially notable because the rest of the choir is dim.

In the lateral parts above the narthex the units were covered by cloistered vaults⁹⁶, which is almost contemporaneous with the Chernigov landmark.

Domes over the corner compartments are not found in the Constantinople churches of the 10th and 11th centuries. In them the vaults of corner units rise only as high as the base of the central arches, while on the outside the vaults and central gables rise above the corner compartments. However, in those structures the choir was placed only above the narthex staying clear of the space of the naos. We will dwell on this issue at length later on, confining ourselves now to the observation that it was the choir structure that led to the appearance of domes over the corner units. The composition was balanced out by two east domes, which finalised the creation of the overall five-domed structure. An example could again be sought in the Tithe Church as, to judge by a chronicle report about the 25 domes, all of its units, with the exception of the arms of the cross, were topped with domes⁹⁷.

The special role of the choir is emphasised by its having a separate entrance only through the staircase tower connected with the choir by an archway. A baptistery adjoining from the south and symmetrical to the staircase tower also had a separate entrance and was not connected with the cathedral space. It had two storeys as evidenced by the doorway at the choir in the southern part of the narthex, similar to the doorway in the northern part. The upper floor compartment could be entered only from the choir.

The choir composition has yet another pointed accent. In the southern part of the choir the arches were supported not by the wall lesenes, as in the northern part, but by paired semi-columns, of which only the capitals have survived, if fragmentarily. The wall below the capitals has a smooth masonry surface. Columns or semi-columns (possibly of marble) were probably attached thereto: similar forms are found in outstanding Byzantine structures, such as the Nea Moni on Chios and San Marco in Venice. Like the north wall lesenes, they rested on the edge of the wall at the level of the choir floor. This southern part of the floor might have accommodated the prince, which would account for its special decoration.

Transparent structure and the interrelationship of all the major divisions was a distinguishing feature of Byzantine capital structures – remember the composition of the north church of the Lips Monastery. Russian architecture fully inherited these features, which can be easily detected in the Chernigov cathedral. In Constantinople structures the height of the columns often served as the vertical construction module while in Russian landmarks the level of the choir was the chief determinant based on which all other levels were calculated, as K.N. Afanasiev indisputably showed⁹⁸. Frequently, especially in early structures, the height of the choir is made equal to the side of the square under the dome, and this relationship is found in the Cathedral of the Transfiguration. If we detract from it the height of the narthex vault or the smaller arches running from the piers to the cathedral walls, we will get the height of the columns. The niches of the ground-floor façades of the cathedral rise to the level of the column capitals. Higher up, at the level of the smaller arches and the vaults above the narthex are the lower windows of the side

façades. Niches appear here on the west façade (the vaults are behind them), while the windows are lowered to reach the base of the vaults.

In Russian churches of the 11th-12th centuries the choirs in the arms of the cross are usually equal to the height of the lower tier and located approximately at the middle of the height of the church. In the Cathedral of the Transfiguration the upper tier is obviously higher. The reason, no doubt, was the desire to have a fairly high choir and to decorate it with grand triple arcades. Had the height above the choir been equal to the height of the lower tier below, the smaller arches above the choir, low as they are, would have gone down another 1.5 metre and in fact transformed from doorways into partitions.

Moulded upper-tier supports are in height equal to the lower marble columns. This type of thinking takes us back to the ancient order system and is perceived as an unexpected echo of Hellenistic classicism. A similar composition is found in the Church of SS. Sergius and Bacchus of Constantinople – another proof of the Cathedral of the Transfiguration builders' affinity with the tradition of the Constantinople school of Byzantine art.

From the slate plates of the arcade stubs rise the arcade arches and the central wall arches, below which are the apices of the smaller arches above the smaller aisles of the naos. Groups of three windows in the centre of the façades (one window in the west façade) are positioned to match the inner arcades, and the three upper windows are cut in the lunettes of the central gables (approximately at the level of the arch openings of the lunettes of the north and south wall arches). All these proportions are traced ideally both in situ and in the cross-sections of the cathedral.

The large size of the cathedral and the monumental nature of its architecture predetermined its overall artistic image. In the Constantinople church interiors space is visually limited by planes and lines, whereas the Chernigov cathedral lacks such lightness: the massive shell and the permanence of major divisions are clearly felt there. The wall thickness – the main dimension – is revealed by archways and the width of the lesenes. Space cannot be claimed to be the dominant determining all the rest: the shell is far too formidable.

Yet, this mass gives no feeling of any heaviness and inertia of the material. The reason is rhythm, a fundamental tradition of Antiquity and Byzantine art. The eye's continuous movement from one shape to another, that swirling, is also present there. Due to the preponderance of curvilinear outlines encompassing all parts of the building and the absence of inner walls the mass appears as a developed structure. Its development rhythm, full of magnificent solemnity, the intricately wonderful vistas both along the axis of the main movement and across (views of arcades through arcades are especially attractive), transparent architectural forms, and the strength and authority of the dome canopy above fully convey the spirituality and sophistication of the artistic language of the epoch. Don't forget that the Tithe Church could have been the same or nearly the same. The Cathedral of the Transfiguration can and must be considered the miraculously survived evidence of consummate architecture of Kievan Rus' of the early period.

Marble arcades, slate cornices and the sanctuary screen formed the interior décor of the cathedral. Excavations in the altar part yielded remnants of a slate pier under the communion table and four stubs of the ciborium above the altar. A synthronos with two steps in front of it was situated along the line of the main apse. Slate plates which were inlaid with triangular, rectangular and square marble pieces (opus sectile) and formed a broad decorative band along the perimeter of the square under the dome were found next to the north arcade.

The architectural characteristics of the building had to be taken into account when painting frescoes on the walls. To begin with, the inner structure was translucent: there are next to no walls in the dome space and the surface of the vaults is hidden by the arcades. A similar setup is found in Constantinople churches with their façade walls cut by large windows, but there the inside walls were lined with marble up to the vaults. No traces of lining have been found in Chernigov while fragments of frescoes attest to the primacy of fresco painting. The absence of windows in all the upper-floor corner and lateral compartments afforded extra room for frescoes.

Sizable wall surfaces above the windows of all apses constituted another important difference that had to do with the big height of the building (due to the choir structure). It was during that period that the crucial altar composition of the Eucharist was assigned its place, and the Chernigov cathedral must have

92. The substitution of columns for piers in the Constantinople churches led to the removal of arcades from the sides

93. In the Cathedral of the Transfiguration the sanctuary screen was within the plane of the inter-altar wall lesenes

94. N.V. Kholostenko reconstructed the choir vaults of the lateral compartments of the narthex as domical

95. In Constantinople architecture light domes were often used precisely to light up the choir. They could be above

96. Attempts to reveal the secret of the compositions of medieval (including Russian) landmarks made, as a rule,

been one of the first churches to enable its location in the canonical place – above the three windows of the central apse⁹⁷. The height of the apses was responsible for turning the wall surfaces between them into a semblance of a pier by introducing there high lesenes, just as it was with the main piers of the cathedral. Such huge framing of the central arch of the altar was absent in the Constantinople monuments. In the mid-11th century the scene of the Annunciation appeared in the upper part of those lesenes which, together with the Eucharist and the Virgin Orans in the conch of the apse, formed a composition inseparable from the painting on the dome and the main vaults both in content and in its general visual appearance to the congregation. It could be that precisely such development of the painterly décor necessitated the choir being restricted in the east by the side arms of the cross, thus making the entire altar composition visible.

The image of the cathedral's intricately beautiful interior complements its fortunately surviving exterior [ills. 88, 95]. Despite individual, at times rather coarse alterations of the 18th and 19th centuries, the overall view of the cathedral wins over the viewers by the harmonious rhythm of its majestic five-domed composition. The exquisite arches dividing the façades make this rhythm delicate and lithe. The beauty of coloured and decorative masonry bespeaks a rare thoughtful attitude to building technology from the artistic point of view. A great cultural, and highly probably the same construction, tradition is behind this monument, just as behind the Tithe Church.

Early Russian churches differ markedly from the multitude of their Byzantine counterparts in the correlation of the height of the arms of the cross and of the corner compartments. The churches built in the Balkans, in the Caucasus and in Constantinople and its environs usually have clearly delineated vaults of the arms of the cross rising above the much lower corner compartments. In Russian structures of the second half of the 11th century all parts of the façades are of the same height, with the vaults of the arms of the cross being at the same height as the rest of them, which results in their being crowned with characteristically Russian semicircular gables (*zakomars*). The harmony of the semicircular tops of the Chernigov cathedral is at the source of the tradition – it is so convincing that it seems to camouflage an entirely different nature of its genesis.

The corner parts of the Cathedral of the Transfiguration indeed rise only as far as the base of the vaults of the arms of the cross and are terminated with straight lines (cornices), as is evidenced by masonry extant for nearly the entire height of the eastern part of the north façade. This is further proof of the origin of the tradition and the early stage of its development. New are the domes over the corner compartments of the choir, which balance out the heights of the façades and produce, together with the central gables, a rhythm of similar semicircular outlines. The construction of a spacious choir at the client's request predetermined the appearance of additional domes: they were conceived in advance, and counting on skylight through those domes, the architects left the walls of the lateral parts of the façades without any windows. The domes received a well thought-out and coordinated spatial solution, in which the drums of the smaller domes have the same height as the vaults of the arms of the cross. The pyramidal composition makes the exterior integral and symmetrical.

The beauty of the domed cross-in-square canopy and the complex rhythm of the curvilinear outlines had been developed ideally in Byzantine church interiors, but it was only in the Russian structures of the 11th and 12th centuries that it was conveyed with such care in their exterior. In the Cathedral of the Transfiguration it was enhanced and made more intricate by many particulars of the façade segmentation.

The spatial composition is not as simple as it may seem at first glance. The side apses have to this day retained an outside projection on the eastern side, initially quite noticeable (the side apses were raised by two metres in the late 18th century). A projection also singled out the altar part of the cathedral, which clearly divided the volume into a five-domed square naos, the lower altar and the two-storey narthex, which was adjoined from the west, had no domes and was expanded by the staircase tower adjoining from the north and the baptistery from the south.

With the exception of the arms of the cross, the walls terminated in straight lines (apparently, topped by cornices with a curb stone course). The walls were of uneven height, but were evened out in the 18th century. This was explained by the different width of parts of the walls: the arches crowning parts of the walls sprang

from the same height, but as their width differed, their rise was also different. The arches of the west parts of the lateral walls of the naos rose the highest, the arches of the east parts symmetrical to them are noticeably lower (a similar arch was even re-modelled and raised higher on the west façade under the impact of the classicist taste of the 18th century). The unequal width of parts of the walls came as a surprise because inside all the aisles were of the same width, which was also a result of the disparity between the inner divisions and the outer lesenes – another unexpected thing for the 11th century not to be found in other Russian monuments. Such correlations are not observed in extant Constantinople structures either; a slight displacement of semi-columns can only be noted on the west façade of the Mireleyon (ca. 920).

In the Chernigov cathedral façades attention is drawn to the rhythmically disparate divisions in the upper and lower parts of the building. The upper, albeit not quite precisely, reproduces the inner structure, while in the lower part of the north and south walls there is a row of nine similar niches. One of them – the fourth from the east – was made somewhat bigger on each façade and turned into a portal displaced from the transverse axis of the dome space. On the basis of this disparity a supposition has been made that the cathedral was started to be built as a basilica. This complies with the chronicle report that Prince Mstislav Vladimirovich, who passed away in 1036, was buried “in the church of the Holy Saviour which he himself had founded and which by that time had risen to a height that a rider standing on horseback could reach the top with his arm”¹⁰⁰. The difference in construction techniques employed in the lower and upper parts of the cathedral also favours this supposition¹⁰¹.

The question arises whether the construction concept and technique changed fast and the cathedral was finished within the following few years, or whether there was a break in the construction project. We have already considered the cathedral layout, which clearly attests to the integral overall concept and the primacy of the basic domed cross-in-square structure (note 101). Let us dwell on additional arguments in favour of the altered concept. The difference in construction technique is absolutely infinitesimal and has to do with the coarser irregular masonry in the lower parts, where unworked stone was used in profusion. Meanwhile, opus mixtum with a course embedded in crushed-pottery mortar remained the same in the two periods. Such difference is common among 11th-century landmarks, with stone used noticeably in the lower parts and giving way to mostly brick as the brickwork rises. Furthermore, from the outset the lower part of the Cathedral of the Transfiguration was given regularity with the help of a decorative finish, which covered the masonry nearly entirely and was patterned in imitation of regular quadra masonry. Every quadra was framed with two parallel lines, and the resultant strips were coloured in red, showing quadras alternating with crushed-pottery mortar¹⁰².

The segmentation of the lower tier into similar niches and of the upper tier in accordance with the domed cross-in-square structure may well have resulted from a single concept – such is the 14th-century Church of St. John Aliturgetos in Nesebar. However, in a church almost contemporaneous with the Cathedral of the Transfiguration – in Canli Kilise (Asia Minor) – four ground-floor arch niches correspond to three upper-floor parts of the walls.

The break in masonry does not follow a straight line: it rises from the east (where the initial masonry goes up to the apse windows) to the west, where it is observed in the high west portal, in the arch niches on both sides of it and, consequently, in the vaults over the narthex choir. The narthex composition with the classical domed vaults of its lateral parts is associated with the idea of the domed composition of the centre. The west façade composition is likewise absolutely structured from top to bottom with no hint of any duality. The sudden death of the prince might have interrupted the project, but there can be no doubt about the single concept or the integral cathedral construction period¹⁰³. The emphasised symmetry and triumphant nature of the west façade show that from the very beginning it was regarded as the main one. The princely chambers were on that side and, apparently, the ceremonial square, as it was in Kiev.

On the one hand, the general system of façade segmentation is highly structured and, on the other, it is full of fine nuances and distinctions. On the whole, it is dictated by the inner structure to such an extent as to seem its projection on the façades. As a matter of fact, it has its own logic and its own stylistic principles. This applies above all to the relief segmentation of the walls

97. Five to ten years later this scene was positioned in the same way in the St. Sophia Cathedral of Kiev. Although

98. *The Tale of Bygone Years*, 1950, p. 101.

99. Kholostenko, 1990, pp. 6-8.

100. This technique evidencing the architects' attention to wall surface finish may be proof, albeit inconclusive, of the

101. N.V. Kholostenko himself did not speak about any break in construction work or its duration. However, assertions

and the system of decorative masonry.

Relief segmentation of the façades forms the basis of façade compositions, yet they are never massive or markedly jutting out. Nothing is added to or superimposed on the wall: the procedure is always that of detracting with the help of niches of various shape and depth, between which bits of masonry remain. Formative elements have a small profile, the correlations are mobile and shifting; just as inside the cathedral, they produce the impression of a resilient and differentiated shell. All these effects are similar to those observed in Constantinople art.

The cathedral apses have semicircular outlines. Mouldings make the central apse look five-sided, with niches placed in three tiers in it and in two tiers in the lateral apses. The lower niches all begin at the same height, but they are slightly higher in the central apse. Of the five niches of the central apse the three in the middle were turned into windows, while of the three niches in each of the lateral apses the ones in the centre were replaced with windows. In the lateral apses the niches closest to the main apse were destroyed in later remodelling. The surface of the lateral apses is asymmetrical relative to the axes of the aisles, the windows were cut along those axes and the grouping of the niches in threes on the outside masks the different width of the surfaces on the sides of the windows.

The borderline between the windows of the first- and second-tier niches corresponds to the level of the choir inside the cathedral. The hollow niches in the second tier of the central apse alternate with flat ones (with hollow niches placed along the axes), while the groupings of niches in the lateral apses are somewhat haphazard. Above the windows are flat niches, a similar niche in the south apse is symmetrically surrounded by hollow niches, and as the wall surface to the right remained vacant, the architects, taking up the rhythm of the already formed group, placed another flat niche there. Such a niche could have been placed on the other side if the apse surface had been seen as symmetrical with respect to the main nave axis. There have survived only three niches in the north apse – the central one plus two to the north – of which only the one on the outside is hollow. There may have been a fourth niche, but it was lost in remodelling. The different rhythm of the niches – three and four – in the tiers of the lateral apses and striving after symmetry in the apertures placed asymmetrically on the apse surface were to remain a feature of Russian architecture in the centuries that followed. This technique of filling the apse surfaces with niches, one next to or above another, was characteristic of 11th-century Constantinople landmarks.

It's worth noting the special expressiveness of hollow niches. Usually they emphasise the weight of the walls, but there they make the jutting out forms look less massive by cutting into them in the direction opposite to the projection.

In the layout the cathedral walls seem to be segmented below by the projecting lesenes, while in reality, as we have seen, they were segmented by niches. All segments of the upper parts were formed in exactly the same way. The main surface of the façade is the one closest to the viewer. Semicircular mouldings, similar to the apses or the semi-columns of the inside piers, were accorded an important role. We saw that inside the cathedral the arcade mouldings begin from the setback formed by the recess in the piers. In the façades these forms are interrelated in the same way. The semicircular mouldings run through all the piers between the windows and only through them. The piers with the adjacent window recesses are done like piers of the inner arcades, so groups of two or three windows on the façades can be correlated with double or triple windows with marble insulating piers of the Constantinople landmarks. The windows and mouldings begin at the batter, the entire stretch of the wall recedes from the lower surface, and only the mouldings (semi-columns) remain within the plane of the latter. Parts of the walls turn into niches, and the lesene moulding forms the edges of these niches. The same segmentation system is repeated if there are more windows above.

The compositions of the main parts of the walls form the façades. Only in them do the windows appear in three tiers whereas in other parts the windows are only below. The window openings form symmetrical vertical groups. The middle parts have three niches one inside another: one begins under the first tier of the windows, another under the second tier (at the choir floor level), and still another occupies the lunette of the gable. The architects try to repeat the same segmentation, with the exception of the lunette, in the smaller parts. At the base of the windows of the first tier there is always a recess in the wall, but higher up, in the absence of windows or semi-columns, there is confusion. The second niches are in the two eastern parts of the

south façade and in the smaller eastern part of the north façade. In the western part of the south façade the second niche is strangely placed at a higher level. The smaller parts of the north façade have no second niches at all, and the wall surface remains at the level of recess at the base of the lower windows. However, the lesenes have side moulds simply hanging where the batter should have been; in the eastern part one of the mouldings extends to the lower windows.

The west façade has trimmings of a somewhat special nature: segmentation here is uniform from top to bottom. The first niches form whole parts, as it were, starting from the very bottom. The second niche is positioned precisely in the northern part. There are three moulds in the central part by the gable (as on the side façades), one of them ending in the batter at the base of the lunette. The other two merge before reaching the level of the choir and form a lesene going all the way down; the surface of the part is left even. The surface of the southern part is even all over. The moulds at the gable hang, cut short at an indefinite level.

Niche trimming looks like a notched lesene. Only at the top, where the moulds go away from the lesenes like the gable moulding, do they become obviously separated from the “core” of the lesenes. Every motif comes into being on its own, jointness is possible and logical, but not mandatory. The middle of the lesenes is formed by cluster compositions of semicircular and angular mouldings. In accordance with the general nature of forms tending to openwork, these mouldings are inside the niches, flushed with the lesene. Thus delineated, the pilasters of sorts correspond, in level and height, to the piers in the upper-tier arcades. A parallel to the pilaster outlines is found in the pilasters of the Church of St. George of the Mangana, Constantinople. N.I. Brunov wrote a separate article on the oriental origins of such elements, but even more significant is his conclusion that they had made their way to Chernigov from Constantinople¹⁰².

In the central drum of the cathedral eight windows alternate with hollow niches of the same size, and the piers are decorated with semicircular mouldings, whose small slate plate capitals make them look like semi-columns in Constantinople churches. Every one of the corner drums has only four, instead of eight, windows because the architects made no apertures in the part of the drums facing the vaults of the arms of the cross. The possible location of other windows is marked by both inside and outside niches; the semi-columns are placed only on the sides of the windows.

This type of a segmentation system makes the wall surface less massive, more pliable, multidimensional and multivariate. The elegance of the building is enhanced with opus mixtum of stone and recessed courses of brick. It has already been mentioned that this type of masonry in itself can be virtually indisputable proof of the Constantinople provenance of any Byzantine monument. That was the case with the construction of the Tithe Church in the late 10th century, and the same correlation remained relevant for the Chernigov cathedral in the 1030s.

Ornamental masonry was used so extensively, beautifully and regularly in the cathedral façades that it would have been surprising to have concealed it under stucco. True, we know that façade coating might be followed with decorative painting exactly reproducing the front surface of masonry. Such painting has survived and been restored on the façades of the Church of the Holy Mother of God Eleusa (1080) in the village of Veljusa, Macedonia¹⁰³.

With their irregular shape revealed by fasciae (notches), the stones in the masonry of the Cathedral of the Transfiguration walls upset the regular alternation of courses and enhance the free painterly nature of the façade surfaces. Bricks filling the niches could be put vertically (the central gable of the south façade) or crosswise (the west façade), or else form solar signs (the central gable of the south façade). In the central gable of the north façade the bricks are laid in two tumbling courses, each with a different slant, and below runs another course with three horizontal alternating with three vertical bricks.

All conches of the semicircular niches are filled with zigzag masonry, as was characteristic of 11th-century Constantinople monuments. In Byzantine architecture many ornaments are derived from voluminous constructive or decorative forms. To get an idea of the beauty of purely constructive masonry, it suffices to examine the brickwork of vaults in the crypt of the Church of St. Demetrios (Hagios Demetrios) of Thessaloniki¹⁰⁴. Many vault building techniques were born of the desire to do without lagging jacks. Frequently symmetrical work in parallel tumbling courses rising (at a 45° angle) from the centre to the edges was used in making vaults. That was how a conch was made in the apse of the Church of St. Abercius in Elegendi (Kursunlu) on the southern coast of the Sea of Marmara¹⁰⁵. A corbel placed

102. Врунов, 1930, pp. 21-9, especially pp. 24-5.

103. Мильковик-Пепек, 1969, pp. 147-60; Мильковик-Пепек, 1973, pp. 5-6; Мильковик-Пепек, 1983, pp. 86-114;

104. Mango, 1985, ill. 58.

105. Mango, 1968, pp. 169-76.

in such a conch would make masonry zigzagged, as in Chernigov (12th-century masonry in the substructures of the Grand Palace of Constantinople)¹⁰⁶.

Precisely for this reason a “third dimension” seems to be hidden in many Byzantine ornaments: the pattern acquires depth, if not always realised, yet invariably influencing visual perception, and becomes capable of dematerialising the mass even further, making it mobile. The zigzag pattern in all the hollow niches of the Chernigov cathedral seems to impart a certain forward movement to the recessed surface. In flat niches such masonry, in addition to looking festive, is inadvertently associated with a recess that “introduces” space into the mass of the wall. In the north façade one of the niches of the lower tier is topped with tumbling courses, a technique described earlier. Even more interesting is the brickwork in the west gable of the south façade, with corners filled with tumbling courses and the central part with courses echoing the gable outlines, resulting in a geometrical projection reminiscent of the conch masonry in the apse of the Church of St. Abercius.

In the north façade the space between the arch-like crowns of the skylight windows is filled with bricks laid to match the outlines of the arches. This looks like a distant echo of the typical Byzantine method of building a cruciform vault in tumbling rows. We see the same ornament in the façades of the church of Canli Kilise (near Konya, Asia Minor), which was built under the influence of Constantinople master at the same time as the Chernigov cathedral¹⁰⁷. Their genetic kinship is most clearly demonstrated by the patterned masonry of the staircase tower of the Cathedral of the Transfiguration, the walls of which form a continuous decorative composition. The lower-tier arches of the three neighbouring niches are framed with brick courses, in which the gaps form either a zigzag or a vertical strip. The resultant masonry pattern can be easily likened to a projection of parts of flat-arched vaults divided by arches.

The upper segmentation row makes the second tier of the tower look like a light drum by analogy with domical drums. We have already mentioned that the semicircular mouldings are in the window piers. Although only one niche has a window in the upper row of the staircase tower walls, narrow rectangular (rather than semicircular) mouldings are in the piers between all the niches. In this the row of niches is both similar to and different from the row of windows.

Belts of meander are laid in the most prominent parts of the façades, the most intricate of them crowning the drum of the central dome. Under them and over the semi-columns crosses alternate with the letters and figures in the form of bits of ladder with three or four steps (Jacob's Ladder?). These motifs could also have a symbolical meaning; it is not for nothing that they alternate with crosses¹⁰⁸. The belt crowning the staircase tower consists of crosses over the pilasters and closed sections of meander between them. The significant similarity with the segmentation of the drum may be evidence of the fact that the second tier of the staircase tower was a sort of drum for a vaulted or domical (which is more probable) ceiling. If that was the case, the staircase tower was not higher than the narthex.

The pilasters of the staircase tower followed the same principle as the semicircular mouldings of the façades – the second-tier wall recedes forming a batter that determines the projection of the pilasters¹⁰⁹. All the pilasters of the staircase tower have been knocked down, yet we can get an idea of their projection and form by masonry traces and the framing of the niche transformed into a window. When making that window, the architects made ledges on both sides quite similar to the pilaster base. They were also pilasters of sorts, connected above with an arch and transformed into a relief window casing – an utterly unusual form that had never been seen in early Russian architecture till the 16th century and appearing there only fleetingly.

The west façade is the most structured and emphatically symmetrical. The scale of the crowning middle gable is stressed by the increased height of the three upper windows. The size of the gable is made visually even more imposing by the meander belt running slightly lower and adorning only the west façade (the entire area over the meander is seen as the gable). No doubt, the west façade was the principal one, hence its emphasised expressiveness¹¹⁰.

The west façade formed a veritable ensemble because it comprised the cathedral per se, the staircase tower and a two-storey structure in the south symmetrical to the latter (the existing structure was built in the late 18th century). The structure was unearthed during excavations; the corner piers inside made its lower compartment cruciform, and there were three

small apses in the east wall; the compartment was, most likely, topped with a dome supported by wall arches. It probably accommodated the baptistery, which had a separate entrance from the west. Both the staircase tower and the baptistery adjoined the already built cathedral and were connected with it only on the second floor, where archways had been prepared in advance. The compartment above the baptistery may have been intended for the prince or served as a chapel; its wall may have been lower than those of the narthex. Anyhow, could it be that the lowered outside west cluster lesene in the south façade had been correlated with the baptistery segmentation?¹¹¹

The Cathedral of the Transfiguration of Chernigov can well be viewed as an outstanding piece of 11th-century Byzantine art, in which the obvious typological tradition merged with the striving after exquisite spatial, rhythmical, scale and decorative correlations. It was connected with the mainstream phenomena of Byzantine culture. In the absence of extant structures of the first half of the 11th century in Constantinople itself the Chernigov cathedral can probably serve as a source of inference on the forms, techniques and individual elements used during that period in the Byzantine capital and, finally, on the general development of artistic taste. Similarity with the landmarks of Asia Minor (Canli Kilise) and even with those of Armenia (cluster pilaster mouldings) ought to be explained by the mediation of Constantinople, a melting-pot for various traditions. We find many ornamental masonry motifs appear in the walls of the Cathedral of the Transfiguration earlier than in Byzantine landmarks proper.

Although it is impossible to explain the cathedral architecture only by the local conditions, it was precisely they and the clients' demands that were responsible for the peculiar interpretation of the main tradition and for the originality of the cathedral forms. The demand for a spacious gallery that so changed the structure of the canonical four-columned church or of the inscribed cross type must have been the chief driver of structural alterations¹¹². To fulfill the commission, the architects turned to correlations known to Byzantine art of earlier periods. Such train of thought was characteristic of Byzantium: “... in the majority of cases and at all times Byzantine architects, designers and interior decorators considered older works – no matter how old – as models for their own creations”¹¹³.

The Cathedral of the Transfiguration is a monument tracing its lineage from the Constantinople tradition but adapted to meet the demands of the new environment. It has not a single form that would not be known to Byzantine metropolitan art. However, the peculiar combination of these forms and the final thrust of the message were decided by accents placed in accordance with the local needs. The pointedly structured nature of the interior (the manifested strengthened arches, basic cruciform piers, lesenes and arcades), voluminous and somewhat massive forms dictated by invariably large-scale segmentation (nearly always equal to the wall thickness) infused the Chernigov cathedral with expressly monumental stature, strength and measured solemnity that were to become mandatory for Kievan Rus architecture of the 11th – early 12th centuries. Following the Tithe Church, it laid the foundations of the history of Russian architecture and the assimilation of the language of Byzantine architecture, namely, of its mainstream metropolitan trend.

The five domes of the cathedral merit special mention. The use of light domes in Byzantium, their link with the choir and, last but not least, the five domes themselves were fairly common features. But the coordination and wholeness of the Chernigov five domes produce a special impression. The domes always seem to stand separately in Constantinople. Even if they form a group, a certain independence of every element is still felt. Such was the case even with the symmetrically five-domed church of Vira (East Thrace, Greece)¹¹⁴. However, in Chernigov the inseparable community of the domes forming a beautiful pyramidal group and involving in its movement the vaults of the cathedral give the building an integral volume and majestically rhythmical roundness – qualities to be the hallmark of future Russian structures.

The extraordinary similarity of the compositions, size and details of the Tithe Church and the Cathedral of the Transfiguration proves not only that Prince Mstislav of Chernigov chose Russia's first stone church built by his father Prince Vladimir in the centre of his “city” in Kiev as a model for imitation, but also that the first stage of the development of Russian architecture was a uniform process. This is also borne out by Mstislav's still earlier construction project – another small church of the Mother of God of Tmutarakan, which had a nave, two aisles and a narthex¹¹⁵. That stage ended with the death of Prince Mstislav,

106. Trust, 1947, p. 23, pl. 12, fig. 2.

107. Strzygowski, 1903, p. 156; Rott, 1908, p. 258; Ramsey, Bell, 1909, p. 404.

108. Kholostenko, 1990, p. 9.

109. Summing up the form segmentation method, it can be connected with some construction techniques.

110. In front of the west façade was, apparently, the official area. Princely chambers were erected there in the second

111. As a result of excavations supervised by N. Makarenko, two symmetrical chapels were discovered at the east corners

112. The composition of the cathedral is surprisingly reminiscent of Mistra monuments of the 14th-15th cc.,

113. Grabar, 1968/1, p. 21.

114. Built in 1152 on a commission of Isaac Comnenus (see: Ouspenskii, 1907, p. 24; Krautheimer, 1986, p. 376;

115. Rappoport, 1982, pp. 115-6. An expedition headed by B.A. Rybakov excavated the church. The excavations

and large-scale construction started by Prince Yaroslav Vladimirovich in Kiev virtually the following year was inspired by the same ideas implemented in a different way¹¹⁸.

* * *

Yaroslav's construction project had to do with the building of a new district in Kiev – the “city” of Yaroslav. In this he followed the example of his father. The new territory was outside Kiev and therefore the building of the grandiose St. Sophia Cathedral was of necessity accompanied by the raising of fortifications. St. Sophia's of Kiev marked a resolutely large-scale modification of Byzantine ideas by Russian architects, which meant the birth of an uninterrupted, stable local tradition – school. It was the first of the three St. Sophia cathedrals of the mid-11th century built in Kiev, Novgorod and Polotsk. At the same time it is a masterpiece of 11th-century Byzantine architecture.

The concept of “Byzantine art” should be clarified here in the context of our study. It is in no way interchangeable with the concept of the “art of Byzantium”. It is a matter of the type of artistic culture, common techniques and style. Byzantium was the centre of this art in the 6th century, and under Justinian it was almost as large as the former eastern part of the Roman Empire. Common state borders, religious beliefs and organisation, as well as culture on this vast territory led to common artistic development. It allowed fairly significant fluctuations in the nature of regional artistic development, but the ideas, techniques and forms evolved within the bounds of the common culture type. The ages of crisis in the development of the empire dramatically contracted its territory, but helped attain greater stylistic homogeneity of its culture and consolidate the dominant role of Constantinople.

Political, economic and state development of Byzantium in the 9th – 11th centuries not only restored its former boundaries to a certain extent, but also drew new territories into its field of influence. Direct conquest was far less efficient than the spread of religion and culture. Armenia and Georgia, while remaining independent states, retained the community which had formed ages before. Byzantine art as an artistic style or type concept had become common for all those territories. We can speak of Byzantine art in Greece, Rus' and Armenia in exactly the same way as of Byzantine art in Constantinople. Parallels can be found in later styles of world art, such as Gothic, the Renaissance and Baroque. Common style never prevented art of every territory, let alone country, from being original. It is in this sense that we can describe the art of Kievan Rus' as Byzantine without detracting in any way from its perfection or originality. What is more, it is only in this perspective that we can correlate it with world art history and truly appreciate the extent of its originality and perfection.

We shall begin our acquaintance with the St. Sophia Cathedral with an analysis of its composition. The very plan of the building looks unusual: instead of the clear-cut scheme of Byzantine monuments as such or the Cathedral of the Transfiguration of Chernigov, we see a grandiose multi-aisle structure brimming with cruciform piers. It is only gradually that the eye begins to discern the main five-aisle core and two rows of surrounding galleries.

The five aisles are unique for Byzantine architecture: neither in Constantinople nor in any other territory do we find similar structures¹¹⁹. St. Sophia's of Kiev was built as the main cathedral of the capital of a great power. That fact alone was to account for its large size. However, small structures predominated in Constantinople architecture, the tradition of which underpinned the architects' efforts. The masters faced the problem of re-thinking the type and reinterpreting it on a large scale¹²⁰, which led to the appearance of the five-aisle composition. “There is no doubt that due to the impossibility to imitate exactly the Hagia Sophia of Constantinople or any other temple from among the imposing domed structures of the Justinian epoch... they tried to add more grandeur to the inscribed cross type of church by multiplying aisles in the city on the Dniepre”¹²¹.

The Church of St. George of the Mangana was the largest of the 11th-century Constantinople monuments known to us, and the southern church of the Pantocrator Monastery held the same stature in the 12th century. Let it be recalled that Michael Psellus deemed the Mangana church to be enormous beyond understanding (see note 65). In Constantinople with its cult of the dome the Russian monuments find parallels and even rivals in size among the domes with a square base with a side of 10 m in Mangana, 7.5 m in the Pantocrator monastery church and 8.5 m in the Hosios Loukas katholicon (contemporaneous to the

Kievan cathedral), compared with 7.7 m at St. Sophia's of Kiev. The 29 m high St. Sophia's is the tallest of them, followed by the 25 m high Pantocrator monastery church and the 18 m high Hosios Loukas katholicon. The most striking difference is, however, in the layout area of 1,365 sq m in St. Sophia's of Kiev, 990 sq m in Mangana and Pantocrator monastery (each) and 459 sq m in Hosios Loukas. The cathedral commissioned by Yaroslav the Wise turns out to be the biggest of them all; if the width of its outer galleries is taken into account, its overall layout dimensions are 42 m x 55 m (2,310 sq m).

Its five aisles appeared as a result of the desire to have a spacious choir manifested there even with greater purpose than in the Cathedral of the Transfiguration of Chernigov. As has been pointed out earlier, the choir was intended for the prince and his retinue. Let's dwell on this point at greater length. Upon arriving in Constantinople Russian princes and envoys visited its temples, the main of which were the Hagia Sophia, the Hagia Irene, the Holy Apostles and such like huge structures where the emperor attended services. They were always shown to the impressed foreigners. The service at the Hagia Sophia produced an indelible impression on the envoys of Vladimir in 987 (graffiti left by the Russian pilgrims of the pre-Mongol era have survived on the marble enclosure in the southwestern part of the Hagia Sophia choir).

All those temples had big, at times intricately designed choirs that accommodated the imperial retinue, the emperor and the empress. There they sometimes took the Sacrament from the patriarch and other clergy¹²². If we remember that service in those churches was extremely sumptuous and that barbarous Europe of the early Middle Ages viewed the way of life of that great city with envy and admiration, we will understand why rulers emulating the Byzantine court etiquette set up choirs in their churches. That was how it happened in Bulgaria in the 9th-10th centuries, in Venice in the 11th century and in Mistra in the 14th century¹²³. The same explanation applies to the extensive choir of St. Sophia's of Kiev, where even the choir frescoes were on Eucharist themes, corroborating and sanctifying the custom of the prince and his retinue taking the Sacrament at the choir. “The choirs fast rose up over the aisles and the narthex of the princely churches of Kievan Rus for the princes sought to copy the rituals of the imperial court of Constantinople”¹²⁴.

As St. Sophia's plan is based on the Greek cross the distance from the centre of the dome to its walls (including to the wall of the central apse) is equal. The ideal circle with the help of which the Church of St. George of the Mangana was laid out can be brought to mind¹²⁵. The special shape of the upper arcades – their middle arch obviously higher – stressed their solemn look. At the butt ends of the arms of the cross the entire composition has a unified and triumphantly large-scale appearance.

The main cruciform piers of St. Sophia's look so canonically stereotypic that it takes some time to see that the scheme is out of the ordinary. Byzantine architecture has countless combinations of arches and lesenes and occasionally cruciform supports are found, but never do they become an artistic form-building principle as it happened in Kiev. A cruciform pier of St. Sophia's of Kiev is far from being a figure wrapped in itself (although visually it may look so). It is formed of five elements – a square core and four lesenes that, rising up, cease to form a common structure and become part of four different arches. They can be big or small, narrow or wide and that is why lesenes usually differ in size in Byzantine structures. At St. Sophia's of Kiev the lesenes are not only identical – they are exceptionally big: their width and projection are nearly equal to the central wall arches. This may be the key to their construction: the central arches nearly entirely rest on the lesenes and only insignificantly extend onto the pier. A double-ring bonded-face arch (wall arches were indeed made of two courses of bricks) is about 80 cm deep, with the lesene projecting for 70-75 cm.

The arch could have fully formed part of the pier masonry, however, four arches converging on a pier and resting on its core would have led to a fairly complex system of masonry. To avoid it and give the composition a simpler constructive base (as justly observed by N.I. Brunov), the builders of St. Sophia's of Kiev supplied every arch slope with a support lesene projecting equally to the maximum extent. The reason was the specific organisation of the construction process. One would think that there were not many Greek master builders and, given the large-scale undertaking and undoubtedly wide use of local workers, this type of oversimplification would be both forced and sensible. It also shows that the construction of the cathedral was a school where local builders were trained¹²⁶.

116. Before considering the structures themselves it is necessary to specify the chronology of new construction efforts.

117. In the 1920s N.I. Brunov proposed the theory of the five aisles of the Constantinople domed cross-in-square

118. Brunov, 1927, p. 92 u.w.; Brunov, 1929/1930, p. 249; Sas-Zaloziecky, 1925, pp. 70-1; Sas-Zaloziecky, 1928,

119. Delvoe, 1967/3, p. 207.

120. Belyaev, D., 1892, pp. 139-40, 173-4; Belyaev, D., 1893, pp. 105, 174; Belyaev, D., 1906, pp. 105, 109,

121. Bošković, Stričević, Nikolaević-Stojković, 1961, pp. 187-200; Demus, 1960; Delvoe, 1964, pp. 43-4.

122. Delvoe, 1967/1, pp. 140-1.

123. “...A circle drawn as if from the centre circumscribed the church, tall and majestic” (Michael Psellus, 1978, p.

124. For similar observations and analysis of Greek and Russian cooperation in construction projects of the 990s-1040s see:

Let us focus on the vertical structure of the cathedral. The lower tier lesenes carry the smaller arches which support all the vaults over the choir. The vaults were put directly on arches without any intermediate masonry. The arches and vaults have almost semicircular outlines, so their height is approximately equal to half their span. The height from the impost to the arch crown was determined technologically rather than by some particular proportion. An arch springing from some height produced a constructive system that determined the height of the vault¹²⁷.

The system of vaults and arches over the choir was built just as logically. In the Constantinople churches the corner units were covered by groin or domical vaults. Had that scheme been used at St. Sophia's, there would have been closed chapels in the eastern parts of the choir that would differ dramatically from the main space.

Had the western parts of the choir been designed in the same way, the choir would have been occupied by dark and low premises with cloister vaults similar to those under the choir. The expressiveness of such a composition would have been a far cry from the light-filled choirs of the main churches of Constantinople that Yaroslav wanted to emulate. As a result the choir structure differed from both the Byzantine monument of the 11th century and the ceiling in the eastern part of St. Sophia's itself. In the east the smaller arches go up to the level of the slate plates while in the western part this is the point where the arches spring. The entire western part turns out to be raised by 1.2 m, the height of the arches. The vaults of the arms of the cross in the west part are cut by the arches. This correlation has not been repeated in any other piece of Kievan architecture, which proves that this exclusive composition was born of concrete construction needs. All domical vaults rise on drums, forming light domes. The choir accommodates light and solemn one-pier chambers singled out of the system of overall special relations of the interior.

The higher vaults over the western part of the choir gave an impetus to fairly cardinal innovations in the general composition. Due to the aforementioned rise the arch abutments in the western part of the vaults of the transverse arms of the cross (over the choir) found themselves at the same level as the abutments of these vaults themselves – they begin to rise together and the arch seems to be carving out a portion of the western slopes of the vaults. All arches of the west half of the choir also spring from that level. However, the vaults of the arms of the cross above the middle aisles around the dome space spring even higher. Their springing point does not coincide with that of the arches; rather they rise from the latter, thus restoring the usual constructive correlation. As a result the vaults of the arms of the cross have the form of a fantail with the parts closest to the centre higher than those over the outer aisles by the height of arches over the choir. The beautiful pyramidal fantail composition crowning the cathedral stemmed from the risen western compartments of the choir¹²⁸.

One-pier western compartments of the choir are absolutely original in 11th-century Byzantine architecture. The central pier has no lesenes and, reaching it, the four central arches seem to merge with each other. The absence of lesenes makes the central arches wider by that distance and higher by half of it. This is not much, yet enough to highlight the “chambers”. Thanks to the light domes they are the lightest and have the most beautiful ceiling as the four arches springing from the pier look like a flower and are aligned rhythmically in a common “swirling” with all the arches and vaults. There is a nuance within the overall centrally-planned system which underscores the link with the overall structure of the cathedral: emphasis is placed on the high domes adjoining the central dome piers. The whole of the composition is executed with great taste, ingenuity and artistry. Yaroslav the Wise as the client could have been party to its elaboration while the architects supervising the worker *artel* did their best to translate the concept into life. These one-pier chambers might have served as the source of a long string of ceremonial halls of Russian palace and monastery structures.

The central plan of the one-pier chambers of the choir balances out the division into the aisles, making the space of the corner parts and the cathedral as a whole exceptionally integral. The effect is engineered by the complete disappearance of walls in the entire five-naive naos. All the lesenes are alike, form part of the cruciform piers and produce no impression of being part of the walls cut by the arches. However, the absence of massive walls does not entail the dematerialisation of form which the Constantinople architects always aspired to attain. As a result of the wholesale use of equally large lesenes, the architectural forms of the cathedral get the greatest “corporality”, to quote

N.I. Brunov, of all the 11th-century structures¹²⁹. The effect is rather spontaneous because purely practical considerations may have caused the appearance of equally large lesenes. The visual expressiveness of form is secondary: it comes into being after the form has been created and is conveyed not only by the qualities brought about by the human mind and labour, but also by those inherent in the mass of stone itself, such as weight, the self-sufficiency of inertia, and timeless and isolated material existence. Such qualities are not man-made and therefore cannot be deciphered: they can be pointed out but not expounded. This type of expressiveness is akin to pre-Romanesque or early Romanesque structures, and it became part of the recognised concept of Romanesque art. The intrinsic affinity of these phenomena makes it possible to speak of Romanesque aspects in the expressiveness of the St. Sophia cathedral, even though this comparison is meaningless here¹³⁰.

Had this mass come together in clear-cut centrally-planned supports, the association with Romanesque art would have become evident. Characteristically, the architects who had in fact created similar supports interpreted them in a different way. It is not only a matter of the lesenes going away from the pier into the movement of different arches, or the arches blending within themselves the lesenes of different supports into a single whole, or else the core of the piers never revealing itself and dissolving in the movement of the concave surfaces of vaults, pendentives and domes. All those phenomena were quite characteristic of Byzantine art as a whole. St. Sophia's also has some specific combinations. The lesenes project by 70-75 cm while their slate plates at the arch abutments are embedded a mere 40-45 cm deep. The plates do not form the “capital” of the cruciform pier, but belong precisely to the lesenes. The movement of the lesenes on their own, their independence from the middle of the pier stand out visually¹³¹. The expressiveness of arches and lesenes tied with them can best be described by the following quotation from Paul the Silentiary (Paulus Silentiarius): “Each arch joins its unshaken foot to that of the neighboring curve at either end, and so they are fixed together on the edge, but as each rises in the air in bending line, it slowly separates from its former fellow”¹³².

The corporeal fullness of forms made it possible to connect somewhat static spatial units into a powerfully integral organism, united not only by the logic of the rhythm, but also by the unquestionable motive force of lesenes and arches. It also became a source of the monumental solemnity of the cathedral. The five aisles of the cathedral enabled the architects to unite the cruciform central space, a must for inscribed-cross churches, with the two-tier inner by-passes characteristic of central Constantinople temples of the Justinian era¹³³. The free and equal arms of the cross formed its main centrally-planned cruciform structure.

The situation might have been unique but for one predecessor – the Hagia Sophia of Thessaloniki. Its composition likewise transformed the tradition of Justinian's churches by organising the skirting peripheral parts of the middle cross-in-square space into a two-tier structure. Their common structure of the domed cruciform canopy might have been enhanced by similar size: both churches were about 17 m wide along the north-south axis within the limits of the free arms of the cross, and the arms of the cross were 16 m high in Thessaloniki and about 17 m high in Kiev. The difference is in proportions. To transform the St. Sophia of Kiev into the Thessaloniki church, the domical piers should be moved aside diagonally by 1.5 m. Add to this the absent lesenes and the smoothly skirting surfaces of Hagia Sophia's walls and vaults, and we will see that, despite the heavier stocky forms, the spaciousness of the main hallowing canopy structure is largely there.

Another distinction is the rather sharp separation of the middle structure of the Hagia Sophia of Thessaloniki from the two-tier galleries skirting the structure. The galleries adjoin the centre without being part of it. This is felt in the ground tier and especially in the upper tier. Hence the measured rhythm of arch openings at the butt ends of the arms of the cross with a pillar reinforced by the lesene, rather than the opening finding itself in the centre, which emphasises the movement along the wall rather than through it; hence the windows in the lunettes of the central vaults turning them into inner space boundaries.

Cross-in-square is not the only orientation of the middle space of the St. Sophia Cathedral. The lateral apses adjoin and fully open onto the north and south arms and, together with the central apse, also restore the classical correlation (naos – three-part altar), which has already been discussed and embodied in the Chernigov cathedral (as a result of which the choir was not extended eastwards from the arms of the cross). Even in the dome space of the St. Sophia of Kiev the viewer feels the solemnly

125. From the modern point of view it would be logical to surmise that the architects first determined precisely the level

126. Komech, 1972, pp. 50-64.

127. Brunov, 1950, pp. 154-200.

128. Brunov, 1928, pp. 258. It makes sense to point to other distant sources of the St. Sophia Cathedral forms.

129. Curiously enough, 19th-c. architects were, apparently, shocked by this lack of order and during repairs added

130. Johannes von Gaza, 1912. Col. 457-465. One can get the impression that our assessment of the expressiveness of

131. It is impossible to overlook the age-old traditionality of compositional ideas. Already N.I. Brunov associated the

spatial “stride” of the far-flung altars, which encourages an especially fervent prayer, the fact that prompted N.I. Brunov to look for compositional and conceptual parallels among a broad range of world architecture phenomena¹³⁴.

The setting off of the altars against the middle structure of the nave and two aisles and its being surrounded by a two-tier by-pass provoke the feeling of the St. Sophia Cathedral's affinity with 11th-century Byzantine cathedrals with squinches. Both varieties were born of searches for a monumental style and recourse to the architecture of the 6th-9th centuries. The Hosios Loukas katholicon is a close analogy of the five-aisle church because its two-storey skirting galleries are fully incorporated into outer walls while the space under the dome is made, as it were, structurally three-aisle by the segmented walls and three altars in the east¹³⁵.

Slate plates were embedded in the cornices and abutments of all arches of the St. Sophia Cathedral. Their trimming was simple – the plate edge was just chamfered, but there are as many varieties of that chamfer as there are plates, the fact evidently explained by the low level of the craft. By the nature of trimming and the extent of projection the placement of plates is more often than not haphazard and only occasionally purposeful. The cornice of the apse walls and the bema has a more delicate trimming in the form of an ogee profile. It is replicated in a simpler way in different parts of the cathedral, with the chamfer now slightly convex, now slightly concave, but more frequently straight. A small platform below the plates determines the degree to which they are embedded in masonry and their projection. Not a single plate was embedded in masonry exactly at the platform border. The plate projection roughly takes into account the thickness of stucco for future fresco painting. The plates were often laid askew, sometimes quite awry, their projection is usually inordinate. In the most primitive version of trimming a groove was made at the bottom of the plate to mark the central platform which was to orient the placement of plates in the masonry.

The projection of plates in smaller arch abutments is approximately the same and increases by the cornice which runs along the arms of the cross at the level of the choir floor. The cornice plates are devoid of any special trimming; they are the same as those at the arch abutments, but their projection is far too big (their lower profiles ill-fit the masonry). Because of its large extension the cornice is made of several plates even at the lesenes. The cornice at the base of the central drum has a big projection and special profile (the pattern is the same but the proportions are different).

The singularised middle and upper cornices and the more painstakingly executed cornices of the apses and the main dome were characteristic of Byzantine architecture (remember the Church of the Mother of God of the Lips Monastery). In Kiev their expressiveness is diluted by the general coarseness of forms. The St. Sophia Cathedral does have finer nuances in plate placement and forms indicating that the master builders had been trained in Constantinople, but they are next to indiscernible due to the generally homogeneous monumental forms. They are a genetic feature rather than conscious interpretation.

The piers in the arcades and in the choir are emphatically “rounded off”, the quality enhanced by their cylindrical bases and tops that seem to tie up the profiled parts, be them edges or projections. On the whole there are eight edges, but there could also be nine (as in the south arcade under the choir); the form remains the same. The piers at the choir are square in principle, with semicircular mouldings along the centre of the edges, which are, however, perceived as cluster junctions of cut and semicircular projections. Meanwhile, it seems that supports of this shape call for square forms of the terminating slate plates. Nevertheless, they are square only in the choir arches. In the lower piers they are rectangular and stretched out through the arcades along the axis of the arms of the cross. Brought from Constantinople, this technique had been used to great effect in the Chernigov cathedral. Here it is just a tribute to tradition, all the more surprising since the mass of masonry resting on the plates is nearly square in cross-section. The plates, projecting towards the aisles, have no projection into the arches between the piers (despite having been profiled at the bottom).

In this case it is easy to explain the form. More unexpected and less understandable are rectangular plates at the piers of the one-pier chambers. The centrally-planned arch compositions, the square cross-section of masonry above the pier, the placement of the piers themselves in the middle are all at odds with the plates being stretched out along the north-south axis. The fact remains unexplainable, and one can only be reminded of the predilection of the architects of that period for the oriented form of supports and the commonplace rectangular marble stubs

in the window and choir arcades (Kilise Djami of Constantinople, Hosios Loukas katholicon).

In articles about the marble details of the early structures – the Tith Church, the Chernigov cathedral and the St. Sophia of Kiev – authors often argue that those fragments belonged to preceding centuries and therefore had been imported to the Dnieper region. The affinity of forms and motifs scattered around the Byzantine world (Chersonesus, Constantinople, Mount Athos and Greece) is the only ground for this conclusion. Such views also crop up in the assessment of St. Sophia's marble details¹³⁶. Meanwhile, they seem to overlook the fact that all marble details – the capitals, portico surrounds, choir plates and the marble screen details – were made specifically for the given monument and a certain place, and that they are limited by the span of openings and the thickness of walls (suffice it to compare two similar capitals – that of the Chernigov cathedral and that of the Tith Church).

They can't be adjusted, but can only be made on purpose. Just as the porticoes of the Kievan St. Sophia cannot be thought to have been imported, so it would be logical to consider the other fragments made in situ. The stable age-old continuity of motifs is a distinguishing feature of art of the entire Byzantine period. It is just as impossible to regard the slate plates of the choir balustrade as imports; along with the slate sarcophagi, they form a single group with the marble details. For this reason, despite the obvious similarities between the ornamental motifs of Yaroslav's famous sarcophagus and early Byzantine art¹³⁷, the point of view of M. Novitskaya and Y. Nelgovsky, which is shared by A. Grabar, seems more insightful and precise: the latter considered the sarcophagus to be the best piece of Byzantine modelling of the 11th century¹³⁸. A. Grabar also convincingly categorised slate plate carvings among the mainstream phenomena of 11th-century Byzantine art.

Some additional information about the structure and decoration of the St. Sophia Cathedral is in the diary of Martin Gruneev, who visited Kiev in 1584. We learn from it about the flat roof of the outside ambulatory, the marble porticoes of the cathedral and the beautiful floors of the inside galleries (laid in “Frankish” patterns). The sanctuary screen doors no longer existed at that time, but the icons of the Saviour and the Mother of God had survived: “it would have been not easy to take them away to another church because of their huge size”¹³⁹.

The diary provides a very interesting detail about a polished (“of the mirror type”) plate of green stone next to the large portico that, according to legend, showed what was thought secret and hidden. Although it is not quite clear where that plate was – “above the great church doors (to the side of the entrances)” – next to the portico or in the lunette above it, an analogy willy-nilly suggests itself with the Constantinople Hagia Sophia. The farthest plate to the right from the main portico leading from the narthex into the main part had a marble representation of the Saviour, in front of which anyone entering the temple inwardly made one's confessions¹⁴⁰. Leaving aside individual descriptions, let us sum up the expressiveness of the interior. Its large scale is wedded to the complexly multiple combination of large uniform elements (spatial units, lesenes, arches). One feels in the cathedral the rhythm of the measured movement of a mass of similar elements, the rhythm of a sort of procession. The composition of the middle cross-shaped space is static to a certain extent, but this feature is overcome by the energy of the skirting movement of a massive structure. Expressive whirling coming from the light drum (“the ever-spinning miracle”, to quote Silentiarius¹⁴¹), is retained as the dominant and is supplemented by the sharply enhanced role of the space of the central apse. The best view in the cathedral is that on the free and therefore deepest east arm of the cross, which is terminated by the central apse. The rhythmic development of movement (the cornice of the apse, the conch of the apse, the bema vault, wall arches and the ring of the drum) complemented by the conceptual bond among the representations (which is likewise developing vertically), the beauty of the mosaics and the spaciousness of the gold background from which majestic figures come out to meet the newcomer all produce an unforgettable picture.

The ability to fit representations into space, which was characteristic of Byzantine art and which was remarkably noted by O. Demus¹⁴², acquired a special mien in the St. Sophia of Kiev. The nature of the projecting lesenes and their active penetration of space have already been mentioned. Painting has boosted their effect by the opulence of single representations on them that inhabited the cathedral and created a world of saints, zealots, martyrs and priests taking in new converts.

132. Brunoff, 1927, pp. 35-58.

133. This is not to say; however, that these parallels categorise the Kievan cathedral among the churches with squinches.

134. Kholostenko, 1967; Ivakin, Putsko, 1980, pp. 293-9.

135. Makarenko, 1930, p. 71.

136. Novitskaya, 1979, pp. 3-12; Grabar, 1976/1, pp. 83-91. Y.A. Nelgovsky also spoke out in favour of St. Sophia mar

137. Isaevich, 1981, pp. 204-11, in particular 209-10.

138. Sakharov, 1849, pp. 72, 105-6.

139. Gaza, Silentiarius, 1912, Col. 399.

140. Demus, 1947.

The interior is made to look like Christian cosmos with full clarity as far as both the concept and visualisation are concerned. This was the cherished aspiration of Byzantine art and the inherited tremendous importance attached by antique culture to the visible world. Everything that Dionysius the Areopagite, St. Maximus the Confessor, St. Germanus Patriarch of Constantinople and Theodore Bishop of Andida said about the meaning and expressiveness of church architecture is relevant and vital to the St. Sophia Cathedral. It is one of the most integral extant examples of the cumulative effect of art on a par with the catholicons of the Hosios Loukas and Nea Moni monasteries.

The main impression one gets in the cathedral is that of the appearance of Christian cosmos to the beholder with the visual embodiment of its supreme truths and the multitude of saints communicating them. This impact perfectly accords with the fact that the cathedral was intended for the metropolitan as the church of all Russia. It was dedicated to Sophia, the universal essence of Christianity which is inseparable from Jesus and the incarnate Word, the Logos, rather than to some individual or event. The *Sermon of Law and Grace* of Kievan Metropolitan Hilarion and the St. Sophia Cathedral were pervaded with the feeling of opening Christian cosmos for new people for whom the time of "grace" had finally come. For the congregation the emphasis in the cathedral is not on the drama of the sacrifice made by Jesus on the cross, but on the light and jubilant feeling of salvation and communion with the created harmony of the universe. The invocation made by hundreds of believers and supported by a host of the representations of saints and the divine liturgy of the apostles, distilled in the prayer of the Mother of God as the Mediatrix of the new people and their capital, reaches the heavenly spheres of the vaults and domes and, harmonised by them, spreads in a hallowing movement across the entire space of the cathedral.

Everything wonderfully promotes this effect – the intentional compositions and forced solutions, reasonable centricity and certain immobility, spatial compositions and massive forms, artistic logic and workmanship spontaneity. It is difficult to pinpoint the sequence in which that fusion formed, yet it is there to inform us with lively immediacy about the spiritual mood of society in the mid-11th century.

Let me add a few details about the fresco decoration of the cathedral inasmuch as it defines its architectural forms. Painting tended to split up large planes. Flat-arched vaults over the underneath aisles and the planes of wall over the arcades are divided into separate rectangular representations framed by large ornamental bands. The artists do not seek to make full use of the surfaces, which accounts for the powerful impact of the large solid mosaic compositions of the central apse. The painterly dissection of planes seems to parallel the rhythm of the marble facing of the churches in the capitals or of the Hosios Loukas katholicon, revealing the common principle: the fields (representations) and framing¹⁴³.

In addition to laying structural accents, painting also decodes the symbolism of architectural forms, making what is being felt obvious. The overall composition of the domed cross-in-square church has already been described. Speaking about the Kievan cathedral, let us point out the angels, cherubim and seraphim filling all the domes and cloistered vaults under and over the choir. The uniformity of the representations and their placement is seen here as communion with the Divine Principle disclosed to the worshippers through them rather than a shortcoming. The heavenly host on the vaults is, beyond doubt, connected with the heavenly protection of the prince and his *druzhina*. The outer south altar is dedicated to Archangel Michael, the leader of that host, the symmetrical north altar is dedicated to St. George, a soldier-martyr whose name Yaroslav took upon being baptised.

Mosaic floors added to the rich colour and elegance of the interior. Their pattern is known to us thanks to archaeological works supervised by M.K. Karger, who scrupulously collected the slightest fragments and, jointly with M.V. Malevskaya, described them in detail and pieced them together in graphic reconstruction¹⁴⁴. Neither in technique (mosaic set in mortar and inlaid stone slabs), nor in motifs, nor in general compositional methods do floors differ fundamentally from those in Constantinople churches. Carpet-like compositions are made of geometrical motifs in which circles tied with straight or likewise circular bands preponderate and jointly form a characteristic flowing ornament, the rhythmic nature of which seems to reflect the curvilinear outlines of arches and vaults.

The central square is outlined with a broad ornamental band; the central field, unfortunately, has not survived. Work on inlaying the floor in the arms of the cross was complicated

by the big projection of the lesenes. In the south arm walkways were laid between the lesenes which seem to have narrowed the arm and turned it into a middle rectangle. The same was done in the north arm from the east side, while from the west they failed to fit the composition within the lesene line and went beyond the projection to the detriment of the pattern. The ornamental motifs in the arms are different, and the compositions are generally oriented lengthwise rather than with respect to the central space.

Floors in the outer aisles were much simpler. In the southernmost apse the floor was made of glazed hexagonal tiles and triangular pieces of smalt. In the north gallery, at the cathedral choir, and in the upper floor of the north staircase tower the floors were made of glazed green plates (70 x 70 cm) with a marble-like pattern; the floors of all the peripheral parts may have been the same¹⁴⁵.

The St. Sophia Cathedral was largely rebuilt in the second half of the 17th and early 18th century, the second floor was added to the outside galleries, and the multi-tier faceted tops of the old domes and the new domes over the galleries greatly changed the building outline. Nevertheless, the distinct centricity and rhythmic diversity of the original composition show through all the extraneous features and continue to dominate the general outlook of Kievan St. Sophia's.

The old outlook of the cathedral is best seen from the east. The nearly fully open surface of the masonry of the apses makes it possible to appreciate the original expressiveness of the façades. The composition of the building steadily and consistently elevated towards the central dome. The single-storey outer galleries gave way to the two-storey inner ones, the corners of the cathedral were topped with smaller domes, between which the arms of the cross rose in a graded fashion, making the four middle domes grouped around the twice as large central dome to go further up. Just as in Byzantine churches, this gradual movement is perceived from the top down rather than the other way round; this is not the energy of ascent, or vertical movement (which would have been indisputable for the 17th century and is seen through the faceted tops of the domes), but the broad hallowing movement of the domed cross-in-square baldacchino spreading from the centre to the periphery.

All the architectural forms are subordinate to the general rhythm. The positioning of every element is determined by the inner structure of the building. This architecture does not know the meaning of façade: everything conforms to the objective of harmony and plastic expressiveness of the outer volume. The wall surfaces are pierced by window and arches, and divided by lesenes and niches into several tiers. Although the cathedral walls were terminated with straight cornices on both sides of the gables of the arms of the cross¹⁴⁶, their lines were totally eclipsed by the circular movement of the domes, vaults, gables and arches crowning the windows and niches. The domes had undulating cornices accentuated by a border belt with arching crowns over the windows.

Curvilinear roofing was almost never found in Byzantine peripheral architecture – in the Balkans, Greece or Asia Minor. It was characteristic of Constantinople architecture and its application in Kiev was indisputably linked to that tradition. Yet, even in Constantinople it never formed such integral and systemic compositions. We have already pointed out the beauty of the tops of the Cathedral of the Transfiguration of Chernigov. Even more consistently rhythmical circular movement orchestrated the expressiveness of Kievan St. Sophia. The beauty of the swirling movement of forms, so characteristic of Byzantine church interiors, is manifest in the exterior of the Kievan structures just as effectively. This distinguishing feature will become a hallmark of Russian churches for centuries to come and largely determine their subsequent evolution.

The cathedral walls are cut through by arched openings of the window and porticoes and segmented by lesenes and stepped niches. The same decorative system is also typical of the Constantinople landmarks¹⁴⁷. The surface of the apses is an excellent example of a well thought-out combination of structural and decorative principles. The three windows of the central apse begin at the level determined by the synthronon structure and decoration. The use of slate plates makes the window piers similar to stubs between the windows, a genetic derivative from triple altar windows of Constantinople churches. The windows are topped with high arches. At the level of the apse conch is the upper row of niches, under which there appeared an intermediate tier of niches because of the large height of the cathedral. It has been supposed of late that the intermediate niches were

141. Of interest is the specific structural division of the cathedral with the help of lesene decoration. Saints are

142. Karger, 1961, pp. 182-205, fig. 74.

143. Totska, Erko, 1976, pp. 121-2.

144. See studies by N.I. Kresalny, Y.S. Aseev and V.P. Volkov in the 1950s (Kresalny, Aseev, 1955, pp. 27-9).

145. Schaeffer, 1973-1974, pp. 197-224; Ousterhout, 2005, pp. 182-92, 207-13.

initially windows, which were filled in later on to accommodate the mosaic scene of *The Communion of the Apostles*¹⁴⁸. Although this version may be tempting for drawing a conclusion on the cathedral painting concept, it is groundless from the point of view of the architectural composition.

In Byzantine architecture niches were often filled in after the arches framing them had been laid; it was a building technique unrelated to any change of concept. Furthermore, all St. Sophia niches were built in a similar fashion, many of them still retain corner puddling going beyond their fields onto the adjoining mouldings. We know not a single Byzantine monument that would have three fairly big windows placed directly over the large windows of the apse¹⁴⁹. Besides, two tiers of niches over the three lower windows were made already in Chernigov, where there are likewise no traces of later relaying.

The windows and niches of the outer apses were determined by their inner two-storey structure. They have no synthronon, and the first tier – a window surrounded by niches – starts much lower than in the central apse. The first row of niches is at the level of conches of the lower apses, while the second row corresponds to the level of vaults over the choir. The short upper window is restricted by the low conch of the upper-floor apse.

The heights of the central and outer apses were determined by the inner structure of the cathedral. The central apse has the same height as the vaults of the arms of the cross over the aisles, and the adjacent vault of the east arm of the cross (the bema vault), in conformity with the stepped structure of the central group, is above the apse outline. The outer apses rise up to the base of the light drums over the east corner compartments. The middle apses have no two-storey structure, and their heights are not strictly defined. The architects structured them with the aim of making the overall composition integral and beautiful. Their heights were determined by the gradual rhythm, the four tiers of niches (with windows cut in the centre of the lower and next but one tier) are similar to the outer ones in number and their placement levels are close to those of the central apse¹⁵⁰.

The other façades were surrounded by galleries, two-storey inside and in width equal to the smaller naves, and single-storey outside and as wide as the central naves. The entire cathedral elevated to the central dome gradually, step-by-step so consistently that the natural supposition is that there had been an integral original concept. However, for quite a while the composition was thought to have grown from the mid-11th to the early 12th century¹⁵¹. It was not until quite recently that the opinion of the primordial origin of the cathedral, together with all of its galleries and staircase towers, gained the upper hand, although there remain many problems yet to be settled¹⁵².

The walls of the cathedral on both the ground and the upper floor are segmented with the help of lesenes, the placement of which corresponds exactly to their location inside. There is one window in every section of the wall below while in large parts of the side façades there are high arches with windows on both sides. Three middle parts of the west façade of the cathedral are pierced by archways which had marble porticoes, just like the doorways of the side façades. St. Eusebius of Caesarea underscored the representative nature of this motif by aptly comparing it to the empress and her bodyguards¹⁵³.

The unanimity of the architectural structure of the entire cathedral is stressed by the continued rhythm of the triple arcades along the line of the arms of the cross which form ceremonial walkways in the centre of the inside and outside galleries; the west side arcade may have also been set up on marble columns. The solemn air of the west façade was strengthened by two staircase towers in the northern and southern parts of the west gallery. The vaults of the outside galleries rested on flying buttresses, which sprang from the outer wall lesenes to those of the inner galleries and thus reinforced the complex structure of the main core. All gallery units were open, with only the east unit of the outside north gallery turned into a burial vault, because of which the inner gallery doorway was bricked up and the burial vault was separated from the west with a wall and an archway. The northwest corner premise of the outside gallery, structurally similar to single-pier corner space of the choir of the Novgorod St. Sophia Cathedral, apparently, had some special purpose. It could be that the need to set it up forced the builders to move the north staircase tower southwards by one unit.

At the ground-floor galleries all lesenes have a simple rectangular shape, and the wall surface over the arches is segmented with niches. The lesenes of the upper-floor façades of the inside galleries were made to look emphatically smart with two projections on the sides of the central semicircular moulding (rem-

iniscent of the window pier of the central apse). The doorway in the south gallery wall (next to the staircase tower) leading to the outside gallery ambulatory bespeaks the closed nature of the upper-floor inner gallery (just as its east wall with the window).

The structural segmentation of the façades produced by the lesenes, arches and niches is even more pronounced compared with the Cathedral of the Transfiguration of Chernigov. As has been noted above (see note 155), it is quite in line with the tradition of Constantinople architecture. Construction and masonry decoration methods are just as similar. Opus mixtum with concealed course, which had already become traditional for Kiev, was used to build the St. Sophia Cathedral, the masonry carefully finished and mortar frequently short of polished. Brick courses and individual stones were marked with notches, imitation quadra masonry was also used extensively, outlined in colour or with a rope imprint on wet mortar (masonry finish has survived in good condition under the windows of the central apse). Backgrounds were often coloured in white and structural lines in red. A representation of the cross made in fresco technique on the float finish during construction has survived in a west façade niche¹⁵⁴.

Westerfeld's drawing showing the St. Sophia Cathedral from the east makes it possible to suppose that figural representations were placed in the apse niches. We do not know if they were executed on the coating or plaster applied to the façades later on. The careful façade surface finish does not prove irrefutably the absence of plastering in the first place (see note 115), it is nothing but testimony to the high perfection of construction work.

The centrally-planned stepped construction of the main and numerous smaller domes crowned the grandiose cathedral. Domes were placed above every cathedral unit, with the exception of the arms of the cross. The smaller and medium-sized domes correspond to the gradual elevation of the vaults, with the general movement culminating in the central dome drum with its 12 windows. A wide meander belt was laid over the windows of the central dome.

What we know about the architecture of the St. Sophia Cathedral can be summed up as follows. Greek architects of the 10th and 11th centuries were familiar with every one of its forms, although not all of them had prototypes in the art of that period. Some of them are traced back to the preceding centuries, the fact explained by the prestige and role of churches of the Byzantine capital. The outward impact – traditions and influences – lays bare and defines the artistic legacy which had become the ABCs and manual for the architects of the St. Sophia Cathedral; however, while explaining to us the origin of familiar elements, they help but little in understanding the specific appearance of the cathedral. The originality of its architecture lies in new correlations of the already known shapes that came into being under the influence of concrete circumstances and construction requirements.

Requirements set by the client, apparently, the prince or the metropolitan, to build the biggest temple in Rus' and to arrange a ceremonial and light choir there were the main reasons for the original makeup of the cathedral. This postulate makes it possible to explain the changes in standard techniques proceeding from the specificity of the cathedral construction process as such. All that is inimitable from the historical point of view, and therefore brings us close to understanding the true nature of the architecture of this building.

The huge five-aisle cathedral with a double row of galleries, staircase towers and thirteen domes lighting up the choir and forming a complex pyramidal top of the entire structure, without parallel anywhere, is a remarkable monument of Russian architecture and culture of the mid-10th century. Artistic perfection and singularity demonstrate the independence and creative self-sufficiency of Russian architecture.

Right after its completion the Kievan cathedral became a consciously chosen model for the main cathedrals of Novgorod and Polotsk. This is borne out by similarities in their dedication and the main compositional methods. The wooden cathedral of Novgorod – the 13-domed oak church of St. Sophia mentioned in the chronicle – burned down in 1045, when the Kiev cathedral construction project was on the whole finished. The new cathedral was built on commission from Prince Vladimir Yaroslavich of Novgorod and Yaroslav the Wise himself, so its kinship with the Kievan model is only natural. What is surprising, however, is that the princes of Polotsk, who constantly opposed Kiev from the late 10th century and plundered Novgorod in 1066, found themselves under the influence of the prestige and beauty of the Kievan cathedral and the Novgorod one built after

146. See chapter by V.D. Sarabyanov of the present publication, pp. 180-262.

147. For more about windows and window frames see: Vysotsky, 1972, pp. 54-60; Rappoport, 1994/2, pp. 94-6; Siromyat

148. The upper windows of the middle apses are bonded by a common two-storey building structure. That would have

149. Karger, 1961, pp. 154-75.

150. Nearly thirty years ago Y.S. Aseev, I.F. Totkaya and G.M. Shtender carefully studied the second floor of the inner

151. St. Eusebius of Caesarea, 1858, p. 515.

152. I.F. Totkaya has for decades scrupulously accumulated information about the cathedral façade finish (see Totkaya,

it when they were building their own St. Sophia cathedral.

The three St. Sophias formed a special group in 11th-century Byzantine architecture. Their common dedication was traced back to the chief temple of Constantinople and was explained by its authority for the newly converted people and at the same time by the desire to be on a par with the Byzantine capital and to have a St. Sophia of their own. The primacy of the Kievan example determined the five-aisle composition of all the three cathedrals, and it's worth stressing the exclusivity of this form for Byzantine architecture. Born of specific local requirements, it was never reproduced in subsequent construction projects¹⁵⁵.

In Kiev itself the building of St. Sophia was but part of a large-scale construction programme. Following in the footsteps of his father, Yaroslav founded his "city", which in size surpassed that of Prince Vladimir. The new earth bank with wooden walls extended for 3 km. Its laying was, most likely, the first in a row of conceived projects because it transformed the "field outside the city" into a protected place that for the following fifteen years became the new city centre. For all the generalisation of the account of Yaroslav's construction endeavours, the Lavrentievskaya chronicle report under 6545 (1037) was quite informative: "Yaroslav founded a great city (Kyev), his city has the Golden Gate, also founded the church of Saint Sophia for the metropolitan and after that the church of the Annunciation of the Holy Mother of God, and then the monastery of St. George and Saint Irene".

There is no doubt that work went on simultaneously at several sites, that they required a large number of experienced craftsmen and unskilled workforce and that all those resources were readily available in the city. In addition to master builders who worked at the invitation of the prince and formed the backbone of the Grand Prince's artel, a sizable portion of the urban population worked as hired hands¹⁵⁶.

The Golden Gate of Kiev was a rectangular structure built across the earth bank with a high archway in its side walls. The gate was about 25 m long and about 12 m high and had a span of 7.5 m (the size of the space under the dome of the St. Sophia Cathedral). Inside the archway, at the height of about 4 m, there have survived holes with traces of wooden beams which evidently served as a battledeck (a century later the Golden Gate of Vladimir was built in a similar way).

The earth banks with wooden structures adjoined the long walls of the gate, made them durable and left imprints on the outer surface of gate masonry (that is, first the wooden structures of the earth bank were built and filled with earth, and then the walls were raised and the gaps were filled with mortar). Building methods (the size of brick, mortar, masonry finish techniques and the way the foundations were made) were similar to those used by the master builders of the St. Sophia Cathedral¹⁵⁷.

The general composition of the Golden Gate had a millennium-long tradition: it traced its lineage back to Roman structures via Byzantine specimens. An archway and vaulted gateway with a small tier above (an attic of sorts), several archways and the upper battledeck were already found among city gates, such as Porta dei Leoni of Verona, Porta Pretoria of Aosta and Porta Nigra of Trier. In the Byzantine period the desire to make the city gates even more unassailable prompted the citizens to place holy images on them (for instance, the famous icon of Christ was placed at the Chalke Gate, the main entrance to the Grand Palace of Constantinople¹⁵⁸).

The Church of the Annunciation was erected over the Golden Gate of Kiev as a symbol of the protection of the city and the state by the supreme forces. As far as we know, there had been no churches built over the city gates until then, and the idea may have jelled in Kiev stage-by-stage. Additions and arches inside the Golden Gate, the same as chronicle reports, may shed light on this issue; in any case the second stage fast followed the first, and the church was already there by the late 1040s¹⁵⁹. There has been no unambiguous solution to this problem so far. The practice of implementing a single idea through consecutive additions, which emerged in the course of building large cathedrals, may be an argument to the opposite¹⁶⁰. Martin Gruneveg left a very interesting description of the Golden Gate, recording a 16th-century point of view that may be a historically true account of the situation: "A chapel was built over the gate, as is customary with the Rus, who adorn the tops of their gates with beautiful small churches, giving them to gods for protection. They may have borrowed that custom from the Greeks"¹⁶¹.

Let us now consider three other Kievan churches of the mid-11th century. Their remnants (foundation ditches, foundations and fragments of wall masonry) were found on Vlad-

imirskaya Street (presumably, the church of St. Irene), in the Georgievsky Lane (the church of St. George) and on the estate of the metropolitan's house near the Streletsky Lane (dedication unknown). They were usually thought to be five-aisle structures¹⁶², for which, however, there are not enough grounds. Most likely, they were nave-and-two-aisles structures with side galleries and a narthex (according to D.V. Mileev¹⁶³). Two of them – the Church of St. Irene and the church on the metropolitan house estate – had staircase towers in the northwest corners (the foundation of a round pier of the tower has survived in the latter case). This alone is proof that the outer aisles were galleries. When somewhat later a winding staircase was indeed put up inside the St. Michael Cathedral of the Vydbichi Monastery, it failed to make its way into it discreetly – an indirect evidence of the lack of precedent. In the monuments under review it is logical to imagine staircase towers standing next to the cathedrals and surrounded by galleries.

Had only the foundations remained of the St. Sophia Cathedral, it would have looked like a nine-aisle structure. In plan the unearthed structures have on the whole five aisles. Although galleries were not an obligatory form of church architecture of the 11th century, they seem to have been precisely that in the time of Yaroslav. The outer aisles of the Church of St. George and of the metropolitan estate church are much wider than the intermediate ones; in all likelihood, they were galleries (we have observed the same correlation between the outer galleries and aisles of the St. Sophia Cathedral). St. Sophia's has remained the only structure in Kiev to have five aisles. Only the main cathedrals of major Russian cities have inherited that composition, which was originally intended exclusively for that type of buildings.

To judge by construction techniques, the three excavated churches form a single group for the duration of the time of Yaroslav the Wise. Fragments of frescoes, mosaics, glazed tiles, slate and marble details found during the digs attest to the sumptuous appearance of those churches. The main dimensions of the Church of St. Irene correspond to the width of the St. Sophia's nave; the square-base of the dome of the two other churches has a side of over 5 m. It is intriguing to compare the size of the Church of St. George with that of its Constantinople namesake, which was built practically concurrently. I mean the Church of St. George of the Mangana, which Michael Psellus found enormous (see note 66). The Kievan church is much smaller – 24 x 27 m vs. 30 x 33 m – but then they were structures of a third (rather than second-) scale order among the Russian landmarks (the Church of St. Irene was 28 x 28 m).

Although the structure of those monumental Kievan buildings will never be verified conclusively, a number of essential problems can be considered at least hypothetically. The presence of staircase towers is evidence of the choir and the second floor over the smaller aisles inside the churches. If we proceed from our postulate that single-storey galleries surrounded the main buildings on three sides, three options were possible when setting up the choir. One was to place the choir over the smaller aisles, with the exception of the east arm of the cross. This brings to mind the compositional methods of the 7th century (Qasr Ibn Wardan). Another option differs from the first by the reduced area of the choir from the east: the choir does not extend to the east corner (altar) compartments – a replica of sorts of the scheme of the Cathedral of the Transfiguration of Chernigov in a more archaic version, with the choir closely surrounding the central space. Still another option is to confine the choir only to the space over the smaller west aisle; this version was to have a future in Russian architecture starting from the first quarter of the 12th century.

After the spatial innovation of the St. Sophia cathedrals – the obvious emptying of the central cross-in-square space of the naos – any of the above schemes seems to be at variance with the nature of this architecture. The only way to go about the structural interpretation of the churches under review is to regard them as nave-and-two-aisles structures with a narthex flanked, on north and south, by galleries (single-storey or, which is less probable but cannot be ruled out, two-storey). We then get in plan a U-shaped choir similar to the familiar Kievan monuments of the second half of the 11th century.

The Church of St. George was scrupulously explored during excavations of the past few decades¹⁶⁴. Fragments of frescoes, mosaics, glazed floor tiles and even a marble column have been discovered. The researchers' opinion of the overall structure of the building as a church with a nave, two aisles and a narthex surrounded by galleries is of exceptional importance for understanding it as a whole. Unfortunately, the two other churches

153. Komech, 2004, pp. 131-8. Also: Komech, 2005, pp. 7-12. Their common compositional methods, building techniques,

154. A precious report about the circumstances of the building of the church of St. George has survived in a copy of the

155. Vyssotsky, Lopushinska, Kholostenko, 1976, pp. 63-85; Vyssotsky, 1979, pp. 22-38; Vyssotsky, 1981, pp. 142-73.

156. Mango, 1959/1.

157. S.A. Vyssotsky dates the additions by the late 11th c. and associates them with repairs rather than the construction

158. S.A. Vyssotsky and E.I. Lopushinskaya (Lopushinskaya, 1978, pp. 33-7) carefully studied the Golden Gate

159. Isaevich, 1981, p. 210.

160. Karger, 1961, pp. 216-37; Afanasiev, 1961, pp. 174-9.

161. Mileev, 1911/1, pp. 117-21.

162. Borovsky, Sagaidak, 1985, pp. 52-6; Borovsky, Sagaidak, 1996, pp. 29-32.

are inaccessible for archaeological investigation, but then it is highly unlikely that anything significant from the point of view of information has survived after wholesale digs and construction projects of the first half of the 20th century.

Our knowledge of the development of architecture in Kiev itself is limited to the structures considered above. However, a true understanding of the development of art in Kievan Rus' of the mid-11th century is possible only after an analysis of two more cathedrals that, although built outside Kiev, are closely linked with its architectural tradition and school. The St. Sophia cathedrals of Novgorod and Pskov not only laid the foundations for the development of art in those cities but, together with the St. Sophia of Kiev, have exemplified the best and, fortunately, the best preserved of the artistic tradition of the epoch of Yaroslav the Wise. With their common features and differences, the St. Sophia cathedrals add to our knowledge of the unity of Russian culture and of the evolution of its local varieties.

According to the First Novgorod Chronicle, the St. Sophia Cathedral was built in Novgorod in 1045-1050 "on the orders of Prince Yaroslav, his son Vladimir and Archbishop Luke". Nothing had been built of stone until then. Builders must have come from elsewhere, and most certainly they came from Kiev, as is attested by the architectural composition of the cathedral and the circumstances of its construction. The commission came not only from the archbishop and the Novgorod prince, but also from his father, Yaroslav, the Grand Prince of Kiev. Even the logic of Kievan urban development was replicated to a certain extent. Indeed, Yaroslav founded a new and bigger city outside the "city" of Vladimir, and the St. Sophia Cathedral was built of stone in the former (the earlier wooden cathedral of St. Sophia had a different location and was not that important). After the wooden church of St. Sophia was destroyed in a 1045 fire in Novgorod, Detinets, the local Kremlin expanded and renovated by the prince, was chosen to host the new construction project. It immediately emerged as the architectural dominant of the city and never relinquished that role throughout the subsequent centuries.

Construction materials and technology were basically similar to those of Kiev. Masonry of brick and stone with opus signinum mortar and concealed course became even simpler and coarser in Novgorod as mostly boulders were used to make walls and piers. Nevertheless, all the arches and vaults were made in classical concealed course brickwork. The front surface of the walls was commonly outlined and coloured to create an illusion of regular brick or stone masonry. In the brickwork of the lower parts of the central apse there are light-clay bricks evidently brought from Kiev because no such clay is found in Novgorod¹⁶⁵.

The chief argument in favour of the Kievan genesis of the Novgorod cathedral is the similar general composition of the two monuments. Each has a nave and double aisles on both sides, galleries, staircase towers and spacious choirs with one-pier chambers in the west corner and is crowned with many domes. With the prince's commission assigned the leading role and the involvement of the same architects in both cathedral construction projects (of course, far from all the master builders were transferred to Novgorod, but some of them probably and almost certainly were), one might have expected the Kievan sample to be replicated exactly. However, other functional requirements and Novgorodian tastes imparted their grandiose stone cathedral with such powerful and distinct originality that it frequently served as a model for local architects in the centuries that followed.

St. Sophia of Novgorod is smaller than its Kievan prototype. The Tithe Church, and also the Chernigov and Kiev cathedrals were structures of the largest scale that remained unsurpassed by the domed cross-in-square monuments of Constantinople. The Dormition Cathedral of the Pecherskaya Lavra (the Monastery of the Kiev Caves) alone was built on an even larger scale in the 11th century. K.N. Afanasiev was the first to discover the possibility of grouping Russian churches by the size of their dome square-base (see note 109). St. Sophia of Novgorod is, so to speak, of the second rank in scale and has analogues in St. Sophia of Polotsk and the Dormition Cathedral of Vladimir. The Novgorod cathedral has the side of the central square of 6.1-6.2 m vs. the 7.6-7.75 m side of the Kievan cathedral. The Novgorod cathedral walls are, however, slightly thicker at 1.23 m vs. the 1.12 m thick walls in Kiev.

The reduced central square predetermined the shape of the arcades in the cross arms – they were made double rather than triple, with one intermediate pier; octagonal in the side arms of the cross and round in the west (the arcades were dismantled and replaced with broad arches in the 17th century)¹⁶⁶.

St. Sophia of Novgorod is surrounded by a single tier of galleries, the lower ones conceived initially as part of the structure and the upper added in the course of construction¹⁶⁷. The galleries were not merely open arcades as in Kiev, but had a special purpose and structure. A staircase tower was fitted out in the southwest corner and the other corners accommodated side chapels. The latter entailed the need to have them fairly capacious, most likely as a result of which their width was made equal to that of the central nave rather than to that of the smaller aisles (as in Kiev). The intention is also corroborated by the fact that the west walls of the eastern chapels were shifted westward.

The new plan correlations led to a number of grave constructional and compositional problems. The choir floor is at the same level both over the galleries and over the cathedral itself (as in the Kievan cathedral). All the aisles and inner galleries of the Kievan St. Sophia have the same width, therefore the vaulted ceiling over the choir, the vaults and the arches under the choir have the same height of about 4 m, approximately half the choir height. In Novgorod the galleries are twice as wide as the cathedral aisles, so given the system of semicircular ceilings with vaults supported by likewise semicircular arches, the gallery ceilings should be twice as high¹⁶⁸, the same as their floors.

The surviving southeastern chapel of the Nativity of the Mother of God is capped with a semicircular vault supported by the semicircular arch of the apse in the east. The abutments of the apse arch are at the level of the stone slabs of the cathedral arcade, that is, they correspond to the general mandatory structural level. Although the north gallery was repeatedly destroyed and restored, its earliest plan shows that the northeastern chapel had a similar structure. The same is true of the northwestern chapel because the symmetrical base of the lesenes is evidence of the existence of semicircular arches there, while in the western part of the south gallery, where there was no chapel from the outset, flying buttresses were built instead of arches. It seems that the three chapels and their structure played an important role in the general composition of the building. They were responsible for the width of the galleries, which in turn led to their high ceilings.

The choir plates and floors turn out to have common levels in the central space and in the gallery, as a result of which the smaller arches and vaults over the choir are elongated, their height being equal to their width, which is twice as big as the usual correlations. Now if in the Kievan St. Sophia arches spring directly from the slate plates, in Novgorod there first comes vertical masonry, which gives way to the radial masonry of the arches. Similarly, vertical masonry first rises over the arches at the base of the vaults, and only then are the vaults themselves laid. Large surfaces extend over the arcades of the arms of the cross, offering opportunities for painting, while the transversally united vaults over the choir create autonomous poorly lit structures that are invisible from the central space¹⁶⁹.

Basically similar to the ground-floor structure, the upper-tier spatial composition rests on the arms of the cross surrounded by a horizontal sequence of smaller arches, the homogeneity of which is enhanced by the rectangular piers of the arcades (octagonal on the ground-floor and distinct from the rhythm of the lesenes).

The corner parts of the choir were turned into single-pier chambers. The octagonal central piers have no lesenes and, just as in the Kievan St. Sophia, the four arches springing from them have spans wider than those of the other small arches. The integral compositional motif and the spread-out voluminous shapes help blend the compartments spatially into a single whole. This effect is, however, somewhat diluted by the shape of the arches in which parts of vertical masonry (originating in the ground-floor zone) transform the overall central-plan composition into the parallel movement of adjoining shapes. The vaults break the central-plan effect even further. The units closest to the centre are capped with light domes, to which the "inverted-V" vaults of sorts of the adjacent units are directed. The vertical masonry between the arches and vaults deepens the vault space and makes it again parallel rather than convergent. Inside the smaller domes start right over the arches and seem to be elongated vaults.

The central flat-arched vaults at the arms of the cross were slightly lowered so that they turned out to be approximately of the same height as the corner compartments – a principle opposite to the stepped pyramidal composition of the Kievan St.

163. Shtender, 1974, pp. 202-12. Efforts undertaken by G.M. Shtender, an outstanding Novgorod restoration worker.

164. Had triple arcades been made at Novgorod's St. Sophia, the arches would have had spans of a mere 80

165. See meticulous research by G.M. Shtender: Shtender, 1977, pp. 30-54; Shtender, 1982, pp. 6-27.

166. The structural correlations of the vertical composition of the cathedral are analysed in detail in: Komech, 1976, pp.

167. The choir over the outer aisles extends as far as the east wall where, as distinct from the Kievan model, no

Sophia. All the extrados are approximately at the same level (with the smaller vaults elongated and heightened and the larger ones lowered), owing to which the domes outside likewise rise from the same height.

The Byzantine canon determines the expressiveness of the central space. Its cruciform nature, the dome above and the rhythmical repercussion of the curvilinear outlines of the arches all produce a powerful effect on whoever enters the cathedral. However, the unusual height of the building (the choir is almost 2 m higher than that of the Kievan model, and the Novgorod cathedral is proportionately 1.5 times higher) and the multiple weighty vertical shapes evenly filling the cathedral impart a lot of novelty to it. The unifying principle of the baldachin is matched by the parallel coexistence of separate spatial units. The feeling of a single structure is combined with the peculiar alignment of separate vertical spatial "columns". The eye-arresting ascent of large lesenes and supports replaces the calmly descending rhythm of lines and surfaces of the Byzantine church. The vertical proportions and the rows of smaller arches producing a strong and somewhat distracting rhythm of peripheral elements bring to mind the idea of a cube rather than pyramid.

Even though the architects built a very tall cathedral (higher than its Kievan prototype), they did not perceive it as a vertically developing organism, and despite the fact that all of its interior parts are full of verticals, it is generally perceived as cube-shaped. The three horizontal levels of stone plates, which in the past had aerial correlations, leap to the eye. The two belts of identical smaller arches evenly skirting the central cruciform space at two levels also develop horizontally. They are split by blind wall planes, as a result of which vertically they are not connected visually, and this only emphasises the horizontal development principle.

The master builders' train of thought can hardly be described as spatial: they cared above all about the stone shell of the building. However, the situation is peculiar in that the Byzantine architectural tradition fixed predominantly on a spatial solution was reinterpreted in this way. The two principles – traditional and newly formed – coexist, depriving perception of integrity and unity and replacing it with complexity and multi-variability. The composition of the cathedral lends itself to diverse interpretations because its expressiveness is polysemantic.

On the one side, the rhythm of curvilinear outline is present in the cathedral. The scale of the central dome and copious light put the upper parts fully in command. The movement seems to be descending from them, coherent and harmonious. The supremacy of single command, a sort of 'monarchist' system is felt indisputably.

On the other side, the straight and clear-cut extended spaces forming parallel structures in the interior dramatically emphasise the upward movement. Straight horizontal and vertical lines detract from the expressiveness of the curvilinear shapes and even invade them. An act of will power left on that architecture an imprint of a culture that differed entirely from that of Constantinople. Its greater bulk and energy hint at the incipient culture of a people whose history had more in common with the states of Romanesque Europe than with those of Basileia Romaion. Instead of the complex integrity, it is a triumph of multi-composite simplicity in which the "monarchist" composition principle coexists with a sort of "oligarchy" of shapes.

Interior masonry produces a mixed impression in the cathedral which remained unpainted till 1108. On the one side, there is a lot of unworked stone that gives a feeling of heaviness and physical inanimateness. Also characteristic of Romanesque art, this aspect is aggravated by major geometrical segmentation. On the other side, the stones and bricks are embedded in mortar, the shapes look handmade and form a solid shell in which everything – piers, lesenes, arches and vaults – are linked inseparably and even the uneven texture produces the impression of continuous movement of surfaces that shape not so much volumes as space. Masonry techniques can lighten even massive forms because wide layers of opus signinum balance out the heaviness of stones and bricks that seem to be first floating in a liquid substance and then get set and still. This impression is enhanced by the careful finish of opus signinum and stone framing with fascia. The movement of architectural forms is contrasted with the immobility of their formative substance, which produces a feeling of conflict between the spirituality of the ideal structure and the inanimateness of the solid and inactive mass of matter. Material rhythm acquires form-building properties only in the regular course masonry of the octagonal and round piers and the radial masonry of the arches.

Although the inner structure of the cathedral (height and the arrangement of lesenes, windows, gables and domes) predetermined its exterior, on the whole it turned out to be rather unexpected. The big height and vertical proportions of the cathedral are obscured by the adjoining high and wide galleries. Extensive unrestricted development has the upper hand over the vertical movement of forms. The domes set at the same level cap the entire volume, therefore movement goes from them sideward and downward rather than through them. Might, strength and inner cohesion predominate in the general impression. The inviolable whole cannot be shaken even by the peripheral location of a large staircase tower with a wide dome.

The architects were mostly concerned with harmonising the overall volume solution. Special attention was paid to finishing touches – the gable cornices and the decorative arches crowning the drums. This also explains the appearance of the cathedral façade termination above the gables for the first time in early Russian construction practice. The walls of Chernigov's Cathedral of the Transfiguration and the Kievan St. Sophia were terminated with straight cornices on both sides of the central gables, and the domes alone imparted complicated and beautifully curvilinear silhouettes to their volumes. The Novgorod cathedral retained the straight termination only in the eastern parts of the side façades, while in the west side semicircular and triangular gables were put up at that level to match the outlines of the vaults behind them. With the reduction of the number of domes, the gables became responsible for forming the silhouette of the Russian church volume, and Novgorod's St. Sophia pioneered those quests. There is evidence that they were made quite consciously.

The west corners of the cathedral have flat-arched vaults oriented along the north-south axis. Their butt ends capped with the gables actually give onto the cathedral side façades. However, onto the west façade these vaults open with their semicircular slopes. The south vault slope is concealed by the adjoining staircase tower, while the north vault slope was to be distinctly visible. But the architects raised a decorative gable in the form of a semicircular wall in the west, in front of the north vault, thus connecting the gables into a single movement along the façades. This first manifestation of the striving after a special rhythmical organisation of the termination of the major volume of a church building became the starting point for the subsequent centuries-long development as the main creative quests of architects of the 11th through the 16th century went precisely along those lines.

High galleries overshadow the cathedral façades. The east façade organised in a special way is the only fully visible one. This symmetrical façade has stunningly monumental forms and dominating rhythmical organisation. The three tall apses define its centre, their scale and might of vertical ascent emphasised by the domes that carry on their movement. As in the Kievan cathedral, the central apse is pentagonal with semicircular dividing mouldings, and its strong projection determines the special nature and activity of the composition. The corners of the cathedral are highlighted by large lesenes while the semi-arches (in shape corresponding to the vaults behind them) transmit the movement to the crowning group of domes. The lean-to roofs of the galleries make the symmetrical structure of the cathedral look grandiose, the might and solemnity of its shapes to be appreciated from afar.

That reckoning was not accidental because the cathedral was built atop the Kremlin hill, which had been emerging as the city's administrative centre from the second half of the 10th century and primarily as the princely and episcopal centre in the mid-11th century. The St. Sophia is seen practically from every part of the city and its environs. From the outset it was built not merely as the residence or the centre of the Kremlin ensemble, but also as the centre of the whole of Novgorod. The east façade facing the river was to become the visual image of the entire city, and that fact determined the architectural forms of the cathedral.

The scale and height of the cathedral confronted the architects with the task of locating the window openings. On the ground floor the apse windows of the chapels closing the galleries form the lower level of openings while the lower windows of the lateral apses are located higher. The three windows of the central apse (the middle one is the highest) form the central group; initially they were cut lower and finished completely, after which the arches crowning them were dismantled and the windows were raised about a meter higher. Most probably, the architects appreciated the height of the cathedral under construction and changed the window level to get the best general composition of the façade.

The way the other windows were located suggests a certain degree of experimentation. Now if the small windows in the east walls of the galleries and the outer aisles are purely functional,

the three upper windows of the apses form a pyramidal group. However, that group is far from really united. The windows of the side apses are vertically paired with the lower ones rather than correlated with the central ones. The small size of the upper window of the central apse prevents it from being the true centre. The absence of niches – striking when compared with the Kievan monuments – deprives the façade of fine relief modelling and complicated rhythm, yet fully accords with the power and weightiness of the forms of the Novgorod cathedral, in which minute chance correlations are inconsequential in view of the success of the overall solution.

The location of window openings on the other façades was determined by the main structural correlations. They were made in horizontal belts, one per part of the wall. On the west façade below the identical openings were cut under the line of the vault under the choir running all along the façade. On the side façades they are slightly raised because the vaults behind them give onto the walls with their butt ends, forming the lunettes into which the window arches were fitted. Along the perimeter of the choir arcossolia were made in the walls to be used as benches or shelves, with small rectangular windows cut in their area along the perimeter. The upper windows are at the level of the vaults and arches over the choir. The windows of both tiers of the central parts of the side façades were placed rather unusually – the logic of cutting two windows lower and wide apart is utterly incomprehensible on the outside. Yet, looking from the inside, the guiding principle is obvious – in the level and outlines they fit in the arches of the double arcades of the arms of the cross. The two windows in the central part of the wall became short of a must in subsequent Novgorod structures, as distinct from the three openings in the Kievan and Chernigov cathedrals.

The original appearance of the cathedral was somewhat different, more complex and differentiated¹⁷⁰. The walls stood without overcoating to the middle of the 12th century. Rosy opus signinum and the evenly rubbed, almost polished surfaces imparted the coarse stone masonry with amazing picturesqueness and vibration that softened the inordinately massive forms. Chamfering and notching of stones, decorative imitation of quadra and concealed course masonry (apses and smaller dome drums), the neat radial masonry of the arch openings and the resilient arch lines of the dome crowns (their outlines have survived under the later cornices) visually filled the structure shell with movement. They did not reveal the structural backbone but, on the contrary, emphasised its pliant nature and ability to develop continuously. The lively rhythm of the colourful shell of the building neutralised the cold alienation of stone, evoking a wonderful feeling of it being handmade and humanised, as it were. There was a time when the cathedral, which now looks stern, cut a welcoming, lighter and more cheerful figure.

In general, the St. Sophia of Novgorod shares that constant quality of ancient and medieval art which, based on what is commissioned and what is predetermined by the experience of masters emulating a concrete model, gives birth to a highly original work of art satisfying the tastes of the local public environment and conforming to certain physical circumstances and possibilities. Very much the same as the use of the Byzantine tradition in Kiev resulted in the appearance of original art, the Kievan tradition brought about the development of a special aesthetic ideal, special expressiveness of architectural forms. Beyond doubt, the St. Sophia of Novgorod is a ducal construction monument of the mid-11th century, the heyday of Kievan Rus', yet its specificity proved so in harmony with the circumstances of Novgorod's social life that not only its forms were emulated in the centuries that followed, but even the expressiveness of its architecture was with the passage of time recognised as matching the spirit of Novgorod's public life. That was why, rather than merely by dint of the cathedral's importance in the religious and political life of the city, the later statement by Prince Mstislav Mstislavich the Bold, "Novgorod is where the St. Sophia is"¹⁷¹, proved so indisputable.

Polotsk, where the third St. Sophia cathedral was to be built in Rus' in the mid-11th century still rise to the height of about 11 m. In its basic compositional concept – a nave with double aisles on both sides, a spacious choir, two-storey arcades in the arms of the cross and many domes – the cathedral was similar to its predecessors of Kiev and Novgorod¹⁷¹.

The masonry technique is closer to that of Kiev than of Novgorod; the same affinity is corroborated by the segmentation of the apse surface with the two-step niches which are absent in Novgorod.

However, there are also grounds to draw an analogy with the Novgorod cathedral. The two structures are similar in size (the Polotsk cathedral is slightly smaller – its dome square-base has a side of 5.85 m vs. 6.2 m of Novgorod's St. Sophia) and both have double arcades. The coincidence in height is even more fascinating. The surviving window in the south wing of the west wall is located at the same level (4.9 m) as a similar window of the Novgorod cathedral: such windows are usually so closely linked with the system of ceilings under the choir that under the circumstances this may serve as evidence of the same height of the choirs in the two buildings. The height of the choir (over 10 m) in Novgorod is explicitly original and inordinate compared with the canonical St. Sophia of Kiev, and its replication in the smaller Polotsk cathedral might have been a conscious emulation of Novgorod's St. Sophia.

The sanctuary structure likewise supports this inference. The windows in the central apse of the Polotsk cathedral were cut at the height of 4.6 m, which is close to the corresponding measurement of the Novgorod cathedral and differs from that of Kiev. The location of the windows apparently became the reason for the appearance of a high (over 2 m) ornamental band that corresponded to the level of the windows and separated the images of the sainted hierarchs from the *Eucharist* above them (which is matched on the outside by a band of high – higher than the windows – niches at 2.85 m vs. 2.38 m in Novgorod).

Now there are small windows (cut in the 18th century) above the niches but, to judge by the difference in the wall thickness, remnants of the earlier windows served as their base. If this is really true, the central apse had two rows of windows, as in Novgorod, and the upper windows started at the same level of 10.5 m (in Novgorod this corresponded to the level of the choir).

The niches in the apses are reminiscent of the techniques of the Kievan school of architecture, however, there are no niches on the west wall with the surviving window and on the east one, on either side of the apse, which likens the Polotsk cathedral to that of Novgorod. As evidenced by the surviving parts of the west façade masonry, its surfaces had an overcoating below with quardas outlined over it – a technique similar to that used in Kiev and Novgorod.

The cathedral plan was based on simple and clear-cut correlations. In the Kievan and Novgorod cathedrals the width of the aisles was about half that of the central naves (differing by about 20 cm) and in Novgorod those aisles even differed in width, while in Polotsk they were all equal in width, which was half that of the central nave. The thickness of the walls and piers was half the width of the aisles, or if we take the wall and pier thickness to be the smaller module, the aisles can be regarded as equal to two modules and the naves to four modules. There is no doubt about the multiplicity and regularity of that plan. There was no trabeated (post-and-lintel) system here, which led to the multiple correlations in the width of aisles and central naves of 11th-century Romanesque architecture, yet the correlation principle turned out to be the same. That system would provide the groundwork for further modifications in subsequent Rus' monuments.

The Polotsk St. Sophia has an elongated sanctuary. The east piers under the dome were placed in the main space of the cathedral, so the sanctuary screen was moved an aisle to the east of the domical square-base. In the western part the choir was most likely made with one-pier chambers at the corners the way it was done in Kiev and Novgorod. In the east the choir could have stretched all above the aisles, however, the solid walls in the eastern part separating the nave and two central aisles in plan evidence rather the traditional division – the choir stretched eastward only above the outer aisles, leaving the three apses open throughout their height. That is why a pair of high cruciform piers rose freely before them, uncrossed by the choir (a novel feature). The Chernigov cathedral had a similar pair of cruciform piers that were, however, connected with the choir because of the nave-and-two-aisles general composition. One can only guess the purpose of the closed compartments in the eastern zones, which could also have been used as annexes.

The sanctuary part might have been singled out by being lowered the way it was done in Chernigov. But then there might have been no lowering, and the eastern part with the adjoining apses might have formed a single part of the volume stretching eastward. The *List of Russian Cities Distant and Nearby* mentions seven domes of the Polotsk St. Sophia¹⁷². Five of them were, most

168. In addition to the aforementioned works by G.M. Shtender, his other publications are of paramount importance

169. Archaeological Report, 1976, pp. 400–1; Archaeological Report, 1977, pp. 410–1; Archaeological Report, 1978,

170. Tikhomirov, 1952, p. 176.

probably, placed canonically – one in the centre and four next to it between the vaults of the arms of the cross. The remaining two could hardly have been above the west aisle – its one-pier chambers, most likely, had vaults of the same type and a dome over the unit closest to the centre. One dome (as in Novgorod) introduces certain asymmetry in the corner chamber ceilings (an ideal symmetrical solution – four compartments and four light domes – was found in Kiev), but that lack of logic was easily overcome by the group of symmetrical five domes. To include one more dome in the one-pier chamber ceiling system would have been quite difficult and at variance with the centrally-planned structure. Therefore, the additional two domes might have risen over the side sanctuary compartments in the east.

Anyhow, the domes rose above the nave and two middle aisles and were surrounded by the vaults of the outer aisles. In the Chernigov cathedral the correlation between the smaller domes and the vaults was solved simply by lowering the corner parts relative to the vaults at the arms of the cross and making the sanctuary part even lower. The vaults adjoined only the drums of the west domes, but their elevation did not close the drum windows. Given the nave-and-double-aisles composition of the Polotsk cathedral, the vaults of the outer aisles were surrounded by the smaller domes on all the sides.

The examples of the Kievan and Novgorod St. Sophias attest to the existence of two versions of the dome-and-vault combination. In one (Kievan) version the vaults of the arms of the cross are higher than the corner compartments, with all of their units having light domes that start at the same level as the vaults (with respect to the stepped elevation of parts of the vaults at the arms of the cross adjoining the drum of the central dome). The dome outlines form the silhouette of the main volume. In the other (Novgorod) all vaults are at the same level and their butt ends form the gable crowning the façades while the large and smaller domes on the outside rise at the same level, above the vaults.

It is hard to say which of these versions was used in Polotsk. The nave-and-double-aisles composition and the placement of the domes above the nave and the middle aisles make a solution after the Novgorod St. Sophia more probable. The composition was clearly individual, as it was in every construction of the 11th century, but it is important to point out the architects' attention to the cathedral termination. We have already said that compositional quests in the centuries to come would follow precisely this course.

Another problem has to do with the stylistic nature of the Polotsk cathedral forms. Its dating is, most likely, confined to the period up to the year 1066. That year Prince Vseslav of Polotsk seized Novgorod and took a polykandelon from its chief cathedral, which, naturally, prompts the conclusion that he wanted that precious trophy to adorn the place of worship in his home town. In the Chernigov cathedral all the apses are semicircular, although the mouldings on the middle apse make it look faceted starting from the window level. In the St. Sophia cathedrals of Kiev and Novgorod the middle apse was faceted, and all structures built in Kiev in the second half of the 11th century had faceted apses. Therefore, the presence of three circular apses in the Polotsk cathedral seems strange¹⁷³. The mouldings starting from the very basement, niches and straight planes of the masonry on both sides of the niches are all arguments in favour of the faceted apses.

These considerations once again bring to mind thoughts about the shape of the piers of the double arcades inside the cathedral. There has survived the lower part of indeterminate shape from the west pier and the round imprint in the mortar from the north pier. The lower part of faceted piers is usually rounded, and the pier is often put on a square base. Even the columns of the Chernigov Cathedral of the Transfiguration have a square pediment. So the proposed reconstruction of all the piers in the arcades of the Polotsk St. Sophia as round¹⁷⁴ does not seem altogether indisputable.

The problem of the staircase towers and the west gallery (narthex) is yet to be settled. There was but one opening in the centre of the west wall, therefore entrances to the staircase towers had to be on the outside or else from the narthex¹⁷⁵.

It is desirable that all parts of masonry be further explored carefully and purposefully (not only from the archaeological point of view) in order to determine the way the cathedral looked and originated with greater certainty. However, already now it is clear that it formed part of a special artistic, historical

and cultural phenomenon, the St. Sophia cathedrals of the 11th century. In addition to dedication, purpose, general composition and building techniques, they all share a similar urban development situation – the Kievan St. Sophia was built in the new "city" of Yaroslav, St. Sophia of Novgorod in the fortified and extended Detinets, while the location of St. Sophia of Polotsk was connected with the transfer of the city centre from the site of the old settlement.

The St. Sophia cathedrals appeared in the three major Russian cities for obvious reasons. The huge and sumptuous nave-and-double-aisles-on-the-sides cathedrals became the centres of spiritual life and embodied a new world outlook and the triumphant might of the princely rule in Rus'. Yaroslav the Wise built the Kievan St. Sophia and, together with his son, commissioned the Novgorod cathedral. That fact alone predetermined the affinity of the Kievan and Novgorod landmarks, while the similarity of the prime cathedral of Polotsk, whose princes were enemies of Kiev and plundered Novgorod throughout that century, is somewhat unexpected. The reason, apparently, was not only the desire "to be up to the mark", but also the common cultural make-up of all Russian lands. The uniform church organisation in Rus' might have been a contributing factor, despite internecine wars among the princedoms.

The Hagia Sophia of Constantinople served as a distant model for those cathedrals. Its scale, solemn choir, the beautiful domical composition and the rituals performed in it inspired clients and architects alike. It was not merely an outside model: the situation of early Byzantine life repeated itself elsewhere. The choice of the church dedication was not accidental either then or in the 11th century. What N.P. Kondakov said of the Hagia Sophia of Constantinople, "By dint of its conciliar importance the Hagia Sophia... was dedicated to the supreme religious idea rather than to some particular local shrine or saint"¹⁷⁶, fully applies to the Russian landmarks.

The universal idea linked with the concept of a harmoniously organised cosmos proved close to the grand-ducal culture of Kievan Rus', its power and solemnity. This is borne out by the architectural monuments, and this is what the 11th-century Russian chronicler had in mind when, in praising Hagia Sophia, he cited Solomon: "I, wisdom, dwell in prudence, and I find knowledge and discretion. ... I have counsel and sound wisdom, I have insight, I have strength. By me kings reign, and rulers decree what is just... I love those who love me, and those who seek me diligently find me"¹⁷⁷.

171. Archaeological Report, 1979, p. 358.

172. Archaeological Report, 1976, p. 400. In a later publication V.A. Bulkin speaks already of faceted piers (Bulkin, 1988, p.

173. According to publications, the towers might have been placed in the southern part of the west façade [Archaeological

174. Kondakov, 1886, p. 109.

Подписи к иллюстрациям

p. 111

Ruins of the Tithe Church of Kiev (989-96), the first stone church believed to have been built in Rus' after the image of the Church of the Virgin of the Pharos at the Imperial Palace of Constantinople

St. Sophia of Kiev, the biggest church of Old Rus' built (1030 – the 1040s) by Prince Yaroslav the Wise, an example of Byzantine architectural tradition developed creatively on Russian ground

Chernigov Cathedral of the Transfiguration (the 1030s), a court church built on commission for Prince Mstislav, elder brother and rival of Yaroslav the Wise in the struggle for the Kievan throne

St. Sophia Cathedral of Novgorod (1045 – the 1050s). The appearance of this church, designed by Kievan architects, largely determined the evolution and nature of the Novgorod architectural tradition

p. 115

75
Hagia Sophia of Constantinople (532-7), interior

p. 118

76
Hagia Irene of Constantinople (mid-6th c.), interior

pp. 120-1

77
Church of the Mother of God, Lips Monastery of Constantinople (908) a section; b plan; c axonometric projection (after A. Migo)

78, 79
Church of the Mother of God, Lips Monastery of Constantinople, cornices

pp. 122-3

80
Church of the Mother of God (Panagia) at Hosios Loukas Monastery in Focide, mid-10th c., interior

81
Tithe Church of Kiev, 989-96:
a plan after M.K. Karger;
b reconstruction after N.V. Kholostenko

p. 125

82
Church of Panagia Chalkeon of Thessaloniki, 1028, general view

pp. 126-8

83
Hagia Sophia of Thessaloniki, mid-7th c., interior

84 Hagia Sophia of Thessaloniki, axonometric projection and plan

85
Dereagzi church, Asia Minor, ca. 900, longitudinal section

86
Dereagzi church, Asia Minor, plan

p. 129

87 Chernigov Cathedral of the Transfiguration, 1030s
a plan;
b choir plan;

c schematic longitudinal section;
d longitudinal section of the south nave

p. 131

88
Chernigov Cathedral of the Transfiguration, view from the southeast

89
Chernigov Cathedral of the Transfiguration, narthex

p. 133

90
Chernigov Cathedral of the Transfiguration, general view of the interior

91
Chernigov Cathedral of the Transfiguration, interior, view of the naos from the west arcade of the choir

p. 135

92
Chernigov Cathedral of the Transfiguration, interior, view through the north arcade

p. 136

93
Katholicon of the Hosios Loukas Monastery in Focide, 1040s, interior

94
Church of the Mother of God (left) and Katholicon (right) of the Hosios Loukas Monastery in Focide, axonometric projection

p. 138

95
Chernigov Cathedral of the Transfiguration, general view from the west

p. 140-1

96
Mireleyon, Constantinople, 930, general view from the northwest

97
Mireleyon, Constantinople, axonometric projection

98
Mireleyon, Constantinople, interior

p. 144-5

99
Chernigov Cathedral of the Transfiguration, west gable of the south façade

100
Chernigov Cathedral of the Transfiguration, view from the northwest

p. 148

101
Cathedral of St. Sophia of Kiev, 1030 – 1040s, longitudinal section of the outer north aisle and plan, reconstruction

p. 150

102
Cathedral of St. Sophia of Kiev, general view of the interior

p. 152-3

- 103**
Cathedral of St. Sophia of Kiev, transept
- 104**
Cathedral of St. Sophia of Kiev, smaller inner galleries
- p. 155**
- 105**
Cathedral of St. Sophia of Kiev, interior, smaller south aisle in perspective
- p. 157**
- 106**
Pantocrator Monastery, Constantinople, early 12th c., northern church, interior
- 107**
Cathedral of St. Sophia of Kiev, interior, choir, general view from the northwest
- p. 158**
- 108**
Cathedral of St. Sophia of Kiev, general view from the east
- p. 161**
- 109**
Cathedral of St. Sophia of Novgorod, 1045 – 1050s
a longitudinal section of the central nave
b section of the smaller east aisle
c section of the south gallery
- p. 162**
- 110**
Cathedral of St. Sophia of Novgorod, interior, view of the vault from the northwest corner under the choir
- p. 164**
- 111**
Cathedral of St. Sophia of Novgorod, interior, northern part of the choir
- 112**
Cathedral of St. Sophia of Novgorod, interior, view of the northwest
- p. 166**
- 113**
Cathedral of St. Sophia of Novgorod, general view
- p. 168**
- 114**
Cathedral of St. Sophia of Novgorod, general view from the south
- p. 175**
- 115**
Cathedral of St. Sophia of Polotsk, 1050s, view from the east
- 116**
Cathedral of St. Sophia of Polotsk, plan
- p. 176**
- 117**
- Cathedral of St. Sophia of Polotsk, central apse, fragment of the old synthronon
- p. 177**
- 118**
Cathedral of St. Sophia of Polotsk, view of the eastern part