

THE HOLY SPACE: ARCHITECTURE AND THE LITURGY

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Any examination of Byzantine architecture must begin with the “deprogramming” of the modern viewer. Having grown up with the tenets of Modernism, we may expect Byzantine religious architecture to be something it isn’t. For example, functionalism was a major concern of the Modernists: we are familiar with Louis Sullivan’s dictum “form follows function,” which has been misinterpreted and overquoted.¹ What Sullivan meant was that the outward appearance of a building should reflect its structural system, but for most of the Modernists, functionalism was related to usage. Usage implies human movement, which is two-dimensional, whereas form, the shape of a building, is three-dimensional—and a Byzantine church is insistently three-dimensional. Moreover, a building does not just house events: its form may amplify, sanctify, comment upon, and interact with the functions it houses, and both form and function can be empowered by the interaction.² But it is a mistake to expect a one-to-one correspondence. The shape of a Byzantine church is usually analyzed in terms of the shape of the liturgy, and in this respect we shall see a general relationship between form and function.³ Nevertheless, it is important to remember that religious buildings have symbolic as well as functional purposes, and that these were expressed in the language of architecture.

A second consideration is the role of decoration in architecture. We have grown accustomed to Mies van der Rohe’s dictum “less is more,” which lies behind most corporate and urban architecture of the last half-century.⁴ Mies believed that good design did not require an excess of useless details but could rely on clarity of organization and correct use

of materials. In spite of lawsuits and derision—one critic responded “less is a bore”—Mies’s architecture was attractive to the Puritan in us. Adolf Loos agreed, writing a manifesto to the effect that architectural ornamentation is criminal.⁵ To the devout Miesians, Byzantine architecture appeals only in its stripped-down, bare-bones state. The Byzantines loved decoration—the more the better, and the garishness of a fully furnished Byzantine interior would have rivaled the excesses of the French Rococo. Fresco, mosaic, sculpture, and marble revetments were an integral part of the whole, and silk curtains, gold and silver furnishings, icons, chandeliers, and liturgical vessels would have filled the interior. In the end, Byzantine architecture is closer to the Postmodern than to the Modern sensibility.

Another misconception about Byzantine architecture is based on qualitative associations with scale—that creativity is linked with size and that big implies better. As a consequence, our picture of Byzantine architecture is dominated by the immense presence of Hagia Sophia in Constantinople (Figs. 4.1 and 4.2). Americans appreciate big things, like Texas, Cadillacs, the Grand Canyon, and the Sears Tower. Hagia Sophia still makes an immediate impact through its majestic manipulation of space and its hundred-foot (30-m) dome. However, by its size Hagia Sophia is something of an anomaly in Byzantine architecture. It was designed to be unique, and so it remained, at least until the sixteenth century when Ottoman mosques began to replicate its form. Moreover, for much of its later history it was a white elephant, difficult to maintain, expensive to staff, and next to impossible to repair.

Hagia Sophia is the best-known and probably the most influential Byzantine church, so it is a good starting point for our discussion.⁶ The “Great Church” was dedicated to Holy Wisdom—a concept and not a person, and best understood in conceptual terms. It was more than anything a symbol of the rule of emperor Justinian, and its construction came at a critical point in his reign. In 532, the feuds between the various political factions in Constantinople culminated in a rebellion, called the Nika Rebellion for the shouts of “Victory!” by the participants. Much of the city was set ablaze, including the old cathedral. A new emperor was proclaimed by the rabble, and Justinian was said to have been on the verge of fleeing until rallied by the courage of his consort, Theodora. The riot was quelled, with thousands massacred, and Justinian emerged secure in his imperial power.

Much of Constantinople had been devastated, and Justinian set about to rebuild the city in his own image, so to speak. The reconstruction of Hagia Sophia was his first project. He engaged two architects with theoretical backgrounds, Anthemios of Tralles and Isidore of Miletus, to create a unique monument. They designed a building that was more a study in geometry than anything else. It is worth emphasizing the theoretical backgrounds of the architects, for no one with a practical background would have attempted such an experimental building on such a grand scale.⁷

In plan (Figs. 4.3 and 4.4), Hagia Sophia resembles any number of Early Christian basilicas, such as the church of Saint John the Baptist in the Stoudios monastery in Constantinople (Figs. 4.5 and 4.6).⁸ This church was built around the middle of the fifth century, and although in ruinous condition today, it is the oldest surviving church in the Byzantine capital. The central nave is flanked by side aisles and preceded by a narthex



Fig. 4.1 Constantinople (Istanbul), Hagia Sophia, general view from the south. The centrally positioned dome is the dominant element in the innovative design of Justinian's "Great Church," with lower half-domes to the east and west. Clerestory windows filled the lunettes, the semicircular walls to the north and south. The large buttresses were part of the original construction, meant to stabilize the high vaults of the church. Numerous accretions, including the adjacent tomb buildings and the minarets, were added during the Ottoman period when the building functioned as a mosque. (courtesy Dumbarton Oaks)



Fig. 4.2 Constantinople (Istanbul), Hagia Sophia, general view from the southeast. The cascading forms of the high vaults are evident at the east and west ends: the hemispherical dome is braced along the main axis by half-domes, which in turn are braced by the conches of niches. (R. Ousterhout)

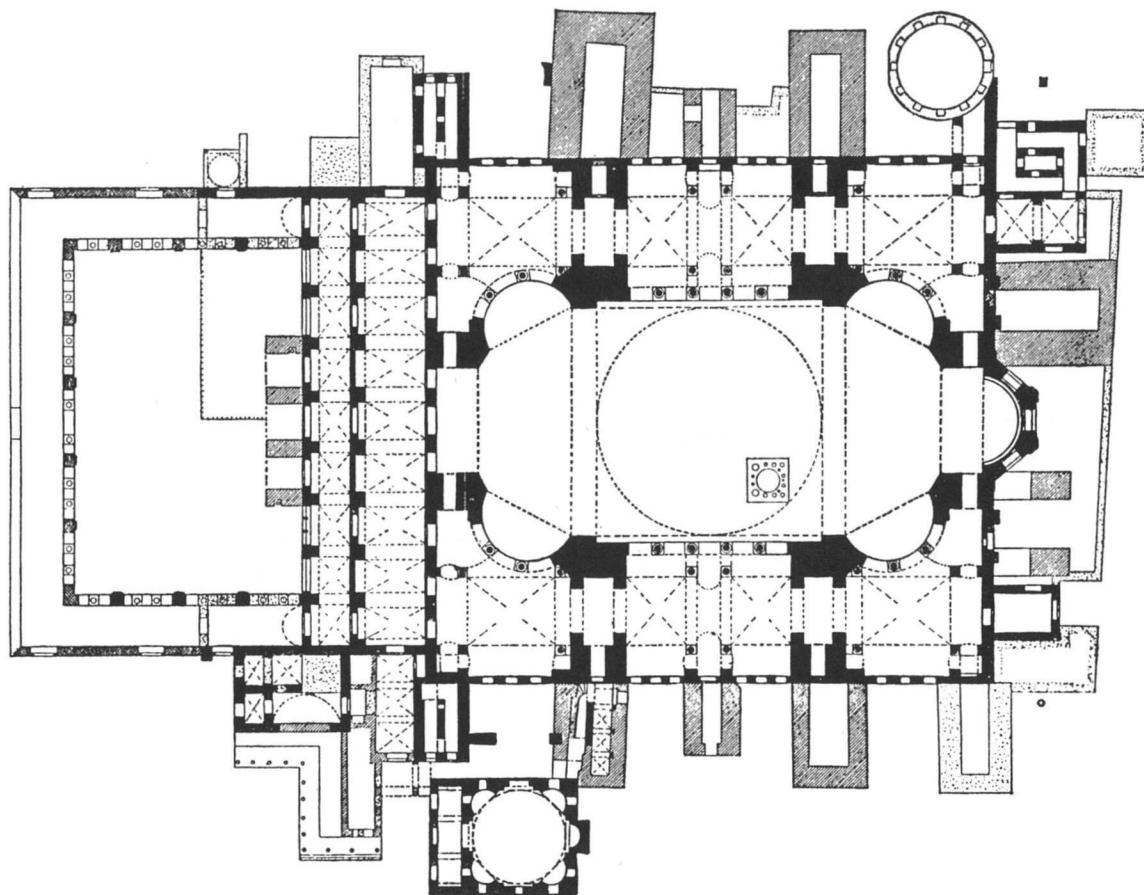


Fig. 4.3 Constantinople (Istanbul), Hagia Sophia, plan. The plan of the sixth-century church is basically that of an Early Christian basilica, presumably reflecting its fifth-century predecessor: the central nave is flanked by side aisles, and a longitudinal axis is defined extending from the narthexes in the west to the sanctuary and apse in the east. Into this traditional format, the great dome and its massive supports interject a centralizing focus to the nave that is emphasized by the rounding off of the corners with exedrae, or colonnaded niches. An atrium once appeared to the west of the church; to the north, a round structure identified as the *skeuophylakion*, or treasury, survives from the fifth-century church. An octagonal baptistery to the southwest was part of the sixth-century construction. (after R. Van Nice, *Saint Sophia in Istanbul: An Architectural Survey* [Washington, D.C., 1965–], pl. 1)

and atrium on the west side, providing a gradual transition from the street to the interior of the church. The side aisles and narthex were surmounted by a U-shaped gallery, and the interior was covered by a wooden trussed roof. The longitudinal axis of the nave terminates in an apse, which formed the visual focus of the interior (Fig. 4.5). The sanctuary, containing the altar, lay just before the apse and extended into the nave (Fig. 4.6; compare Fig. 4.7). The orientation is to the east because Scripture says that Christ's Second Coming will be from the east, and the central feature of the sanctuary, the altar, was viewed as the throne prepared for him. Like a throne, the altar was covered by a ciborium, or canopy. Normally a relic was enshrined below the altar. At the Stoudios, it was placed in a small, cruciform crypt. Within the apse were stepped seats for the clergy, with a cen-

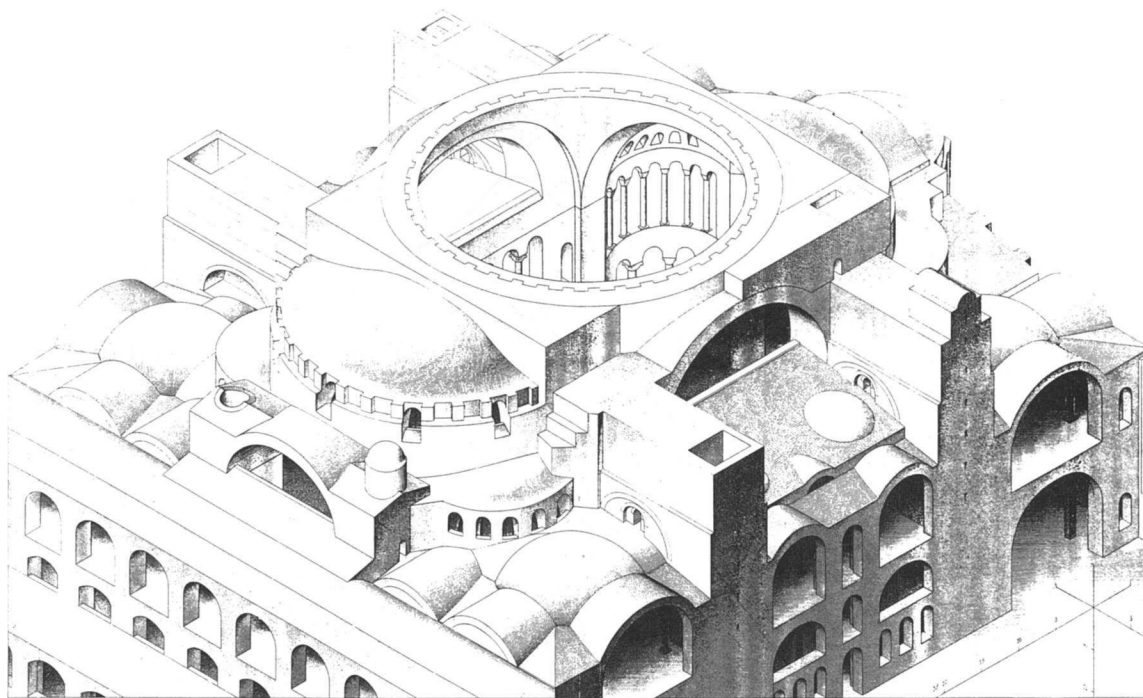


Fig. 4.4 Constantinople (Istanbul), Hagia Sophia, isometric view. The geometrical clarity of the design of Hagia Sophia may be best appreciated in drawings such as this one, which in turn emphasize the theoretical backgrounds of the architects, Anthemios and Isidore, who were trained in geometry. (from A. Choisy, *L'art du bâtir chez les Byzantins* [Paris, 1883], pl. xxiv)

tral throne for the bishop. Because these seats were with the throne, the arrangement was called the *synthronon*, from the Greek *syn* (with) plus *thronon* (throne). The throne served as a symbol of the bishop's office, and he would deliver his sermon from there. The sanctuary was surrounded by a barrier called the chancel screen or *templon*, formed by closure slabs with colonnettes supporting an architrave (beam). The openings below the architrave were not screened, so the congregation had a good view of the parts of the service conducted in the sanctuary. A passage called the *solea* extended into the nave, forming the final processional route for the numerous "entrances" that formed the liturgical service. Somewhere near the middle of the nave, a raised pulpit, or *ambo*, was positioned, and the readings were conducted from there (Figure 7.42 shows an *ambo* in use).

The longitudinal organization of the basilica reflected in a general way the nature of the ceremony. The central area of the nave was given over to processions, and the congregation, separated according to sex, stood along the sides of the nave and in the side aisles. The catechumens, persons not yet baptized, apparently assembled in the gallery, also separated by sex.

The liturgical ceremony began with the First Entrance, in which a procession of clergy followed by the congregation entered the nave from the narthex.⁹ Prayers and singing occurred throughout the ceremony. The clergy moved solemnly into the sanctuary, and the Gospels, representing Christ, were ceremonially "enthroned" on the altar. Once everyone



Fig. 4.5 Constantinople (Istanbul), Saint John in the Studios monastery, interior looking northeast. Now in ruins, this is the oldest surviving church in Constantinople, originally built in the middle of the fifth century. A gallery ran above the *verde antico* (green marble) columns of the side aisles; the supporting brackets can still be seen in the outer wall. (courtesy Dumbarton Oaks)

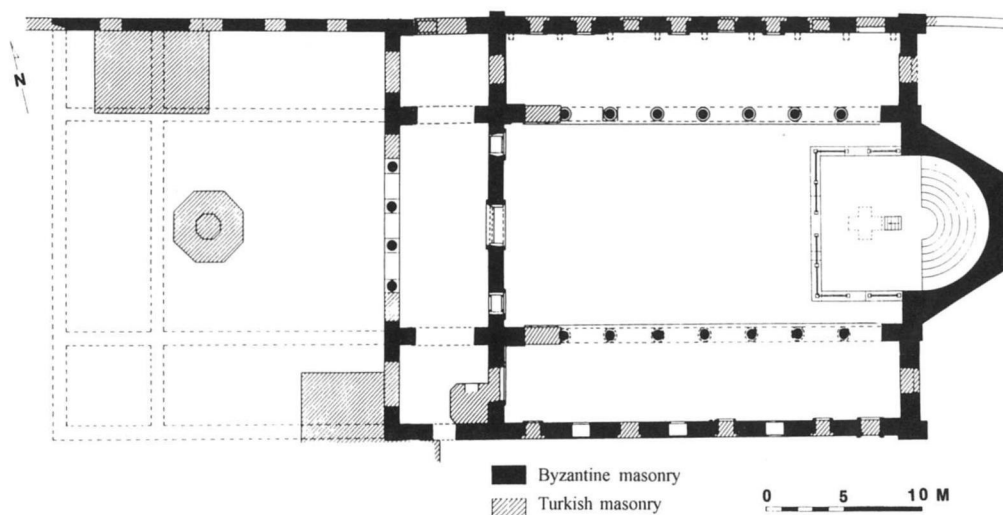
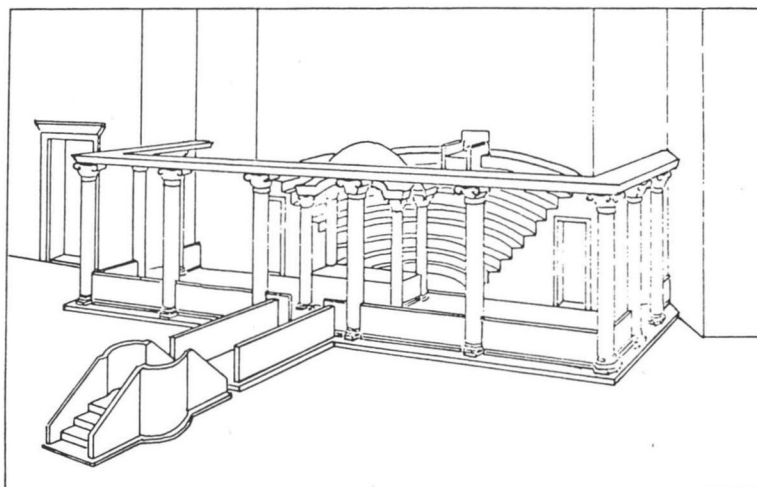


Fig. 4.6 Constantinople (Istanbul), Saint John in the Studios monastery, plan. Typical of the basilicas of the capital, the proportions of the plan are squarish. A portion of the atrium survives, and elements of the sanctuary may be reconstructed, including a small cruciform crypt below the altar. (redrawn after T. F. Mathews, *The Early Churches of Constantinople: Architecture and Liturgy* [University Park, Pa., 1971], Figs. 5, 6, and 8)

Fig. 4.7 Constantinople (Istanbul), Saint Euphemia, reconstruction of the sanctuary. The sanctuary of Saint John must have been similar to this example, typical of the Early Christian sanctuary enclosures in the capital. The barrier includes columns supporting an architrave, providing a greater degree of separation for the sanctuary than was standard in western Europe at this time. (from R. Naumann and H. Belting, *Die Euphemia-Kirche am Hippodrom zu Istanbul und ihre Fresken* [Berlin, 1966], fig. 32)



reached their proper positions, the Liturgy of the Word began, with readings from the Old and New Testaments and singing of Psalms, conducted by lectors and psalmists from the ambo. The bishop would normally deliver the sermon from his throne in the apse. Saint John Chrysostom preached from the ambo, in the midst of the congregation, although this was regarded as unusual. After the sermon, the catechumens were dismissed, and the doors to the church were closed. The Liturgy of the Faithful then began with the Great Entrance, or Entrance of the Mysteries, in which the bread and wine of the Eucharist were transported to the altar. Members of the congregation joined in a recitation of the Nicene Creed, and this was followed by the communion prayer. The clergy and then the congregation partook of the sacrament, which was administered at the chancel barrier. With a final prayer of thanksgiving, the congregation was dismissed. The ceremony ended with the clergy, followed by the congregation, passing in procession out of the nave.

Hagia Sophia was similarly organized, but the Great Church offers a number of significant differences from the basilica. First, because vaulting is introduced, the types of supports must vary. Large piers are necessary to support the weight of the vaults (Figs. 4.8 and 4.9). Second, in addition to the longitudinal axis of the plan, a centralizing focus is introduced into the interior. This is seen most clearly in the elevation (a flattened vertical view), in the spatial effect of the centrally positioned dome. But this is also evident in the plan: colonnaded niches, or exedrae, appear at the corners of the nave (Figs. 4.3 and 4.9). Thus the building juxtaposes a longitudinal axis with a centralizing, vertical axis, creating a sort of spatial ambivalence in the interior.

Before proceeding further with the description of the structure of Hagia Sophia, I should emphasize the great difference between its interior and that of the traditional basilica. I suspect that the transformation reflects a conceptual change that occurred gradually in Early Christian architecture. When Christianity was officially recognized by Constantine in 313, the basilica was adopted as the standard church type. It was a building type that had no specific religious associations, and the Christians wanted to set themselves apart from the pagans. A pagan temple was regarded as the house of the divinity:



Fig. 4.8 Constantinople (Istanbul), Hagia Sophia, interior looking east. The great dome, over 100 feet in diameter, rises 180 feet above the floor. The interior surfaces are revetted with precious marbles, laid in book-matched panels, and the vaults were originally covered with over four acres of gold mosaic. With light streaming in from the numerous windows, the shimmering surfaces created a magical, ethereal impression. As the sixth-century writer Prokopios suggested, the church could be understood as the dwelling place of the divinity. (courtesy Dumbarton Oaks)

the interior was the residence of the god and was off-limits to most mortals. A Christian church was simply a meeting hall, where large congregations could gather for communal worship. As paganism gradually disappeared, and as churches became more lavish symbols of the Christian presence, the church became regarded as the House of God. This would explain the sixth-century historian Prokopios's description that "the visitor's mind is lifted up to God and floats aloft, thinking that He cannot be far away, but must love to dwell in this place which He himself has chosen."¹⁰ As noted in Chapter 2, when in the tenth century Prince Vladimir of Russia sought a religion for his state, the ambassadors who visited Constantinople were so impressed with Hagia Sophia that they declared, "Surely this is the House of God." It was on the basis of architecture that Russia accepted Orthodoxy.

Let us return to the architecture. The great dome, the dominant theme of the building's design, rises above the nave (Fig. 4.8). Most earlier domes were placed above a circular plan, as at the Pantheon in Rome, so that the transition from wall to vault was fairly simple. To place a dome above the rectilinear plan of a basilica required some transition. A square central bay is defined by four great piers, and above, pendentives, or spherical triangles, appear at the corners to bridge the transition from square to circle. It is actually the four great arches that are most significant in the structural system, and along with the

Fig. 4.9 Constantinople (Istanbul), Hagia Sophia, interior, detail of exedra. The colonnaded niches at each corner of the nave create a billowing effect that helps relate the main space to the ancillary spaces. The gallery colonnades are not aligned with those on the ground floor: this counteracts their structural potential and emphasizes their decorative role. The great roundels flanking the exedra are inscribed with Muslim prayers and are remnants of the Ottoman period. (T. Mathews, courtesy Dumbarton Oaks)



pendentives, they adjust the weight of the dome to the four piers. The present dome rises about 180 feet (55 m) above the floor.

Problems were immediately apparent in the design of Hagia Sophia, and Prokopios indicates that structural difficulties were encountered even before the dome was constructed. The basic problem was the unprecedented size of the building. The increase in scale meant an increase in weight, so that an estimated 105 tons of pressure per square meter is exerted on the major piers. Such a great weight would exacerbate any defects that might appear in the structural system. In the vaulting of the building, the most critical points are where the great arches meet the base of the dome. The weight of the dome would cause both downward and outward thrusts. The downward thrusts were not a problem, but the outward thrusts were not properly addressed. To the east and west, the dome is flanked by lower half-domes, and these are in turn braced by the conches of the exedrae in a cascading system of support. However, no bracing appears behind the north and south arches, and originally the area below was much more open, forming a dramatic clerestory. To be stable, the dome required a bilaterally symmetrical system of buttressing; that is, something like the half-domes was necessary on the lateral flanks as well.

These structural problems were compounded by the construction technique.¹¹ Walls and vaults were built of brick and large quantities of mortar. The bricks were about two inches thick, whereas the mortar joints were about three inches thick; in other words, more mortar was employed than brick. Perhaps this was done in order to expedite construction, for we know that Justinian was in a great hurry to have his church completed. However, such large quantities of mortar would have taken a long time to dry to ultimate hardness; the mortar would have appeared dry long before it was completely stable. Thus, a phenomenon occurred, known as the "plastic flow of mortar," in which the walls and

vaults shifted with the pressures exerted on them. Structural problems led to the permanent deformation of the building.

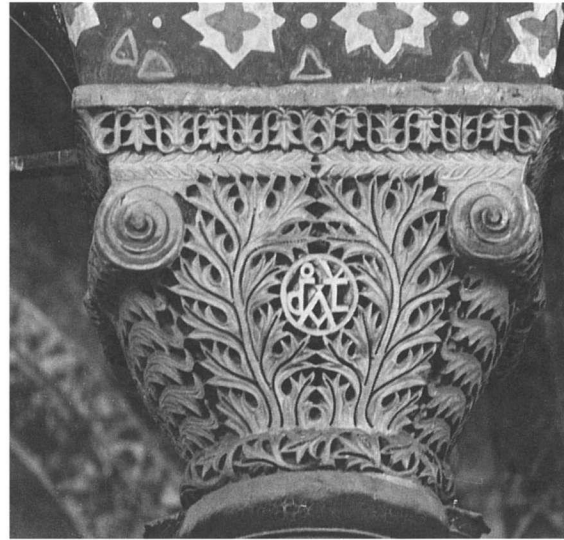
All of this is not to say that Anthemios and Isidore were unaware of structure; simply that neither they nor any of their contemporaries had any experience with a building of this scale. Certain precautions were indeed taken: foundations were carried down to bedrock; major piers were constructed of large limestone blocks with thin mortar beds; lead was used instead of mortar at the springings of the arches and vaults; and imported Roman bricks, four times larger than standard, were employed in the great arches. Nevertheless, the outward thrusts of the dome were never properly addressed, and the building spread laterally. The major piers are now off of vertical by about two feet, and many of the columns in the galleries lean visibly outward. It is not surprising, then, that following an earthquake in 557, the original dome of Hagia Sophia collapsed.

The first dome was apparently shallow and about twenty feet lower than the current dome. Probably a pendentive dome, continuing the curvature of the pendentives, it would have appeared even more daring and would have exerted an even greater outward force than its hemispherical replacement. A new architect, Isidore the Younger, nephew of one of the original architects, altered the design in favor of something more stable, which is substantially preserved today despite partial collapses in the tenth and fourteenth centuries (note the asymmetry in the northeast part of the dome, visible in Fig. 4.8).

Prokopios's impression of the original dome is noteworthy: it was "wonderful in its beauty yet altogether terrifying by the apparent precariousness of its composition. For it seems somehow not to be raised up in a firm manner, but to soar aloft to the peril of those who are in there." His comments are not addressed to the structural system, however, but to the aesthetic effect of the interior. The architects consciously created a dematerialized impression in the interior, emphasizing the transcendental. All surfaces were lush and reflective: the vaults were covered with more than four acres of gold mosaic, the walls and floors with "meadows" of many-colored marble revetments and inlays. Even the structural elements lose the appearance of support: the solidity of the piers vanishes behind such lavish coverings, and the lack of vertical alignment in the nave and gallery colonnades denies their structural role and reduces them to decorative screens. The carved marble details also encourage such an interpretation: capitals (Fig. 4.10), spandrels, and decorative borders are heavily undercut, the vegetal patterns executed with a drill. The delicate and lacelike surface is emphasized, and these pieces seem unable to support anything of substance. All form a unified impression, an ethereal vision. This sense of weightlessness, despite the huge mass of the building, led Prokopios to conclude that the great dome was not supported from below but suspended by a golden chain from heaven.

Can we talk about a relationship between architecture and liturgy at Hagia Sophia? Certainly the basic elements for accommodating the liturgy were present (compare Fig. 6.2) and the worship service would have been similar to that described above. The scale of the building would have resulted in a slower service, with less involvement by the congregation, and a greater number of officiants was necessary. At the time of Justinian, the Great Church was staffed by 60 priests, 100 deacons, 40 deaconesses, 90 subdeacons, 110

Fig. 4.10 Constantinople (Istanbul), Hagia Sophia, interior, detail of capital from the exedra colonnade of the gallery. The basket-shaped capitals are heavily undercut, giving them a light, lacelike effect that counteracts their structural role: they appear unable to support the great weight of the building. Similar undercutting extends into the spandrels, adding to the building's impression of weightlessness; the great dome seems to float aloft while the structural elements below appear dematerialized. Throughout the church, the capitals bear the monograms of Justinian and Theodora, as well as their titles, *Basileus* and—as in this example—*Augusta*. (T. Mathews, courtesy Dumbarton Oaks)



lectors, 25 psalmists, and 100 doorkeepers! But more than anything the architecture of Hagia Sophia was meant to transform the ceremonies it housed, to place them on a level different from common existence, transforming them into more symbolic, heavenly drama.

In addition, Hagia Sophia created an appropriate place for imperial worship. The emperor could participate in the regular worship, presenting his gifts to the church at the altar during the First Entrance and receiving communion before the congregation during the Mass of the Faithful. A throne for him was positioned in the south colonnade. The empress and her retinue observed the service from the gallery, and the south gallery was set aside for imperial worship. If the emperor chose not to take communion, he could view the services from the gallery. By the tenth century, *De Ceremoniis* (the Book of Ceremonies) lists seventeen special ceremonies in which the emperor officially participated. Set in the magnificent interior of Hagia Sophia, the exchange of the Kiss of Peace between the emperor and the patriarch would have emphasized the unity of church and state. The great dome, the celestial canopy in which God dwelled, sanctified the events and ceremonies that transpired below. In the final analysis, Hagia Sophia is best understood in symbolic rather than in liturgical terms.

The scale and the bravura of Hagia Sophia's architectural expression contradict a fundamental principle of later Byzantine Christianity. The Orthodox religion is intensely personal, based on private devotion. Some of the planning ideas of Hagia Sophia find their way into later Byzantine architecture, but on a much reduced scale and simplified in form. In contrast to Hagia Sophia, most Byzantine churches are small and intimate, and the experience is difficult to capture in a photograph; most are taken with a wide-angle lens that makes them look bigger. In contrast to Hagia Sophia, the domes of most later buildings are some ten to twenty feet in diameter. The two centuries following Justinian witnessed both a reduction in resources and a reduction in the scale of church buildings. Churches like Hagia Sophia in Thessalonike (Fig. 4.11), from the eighth century, show

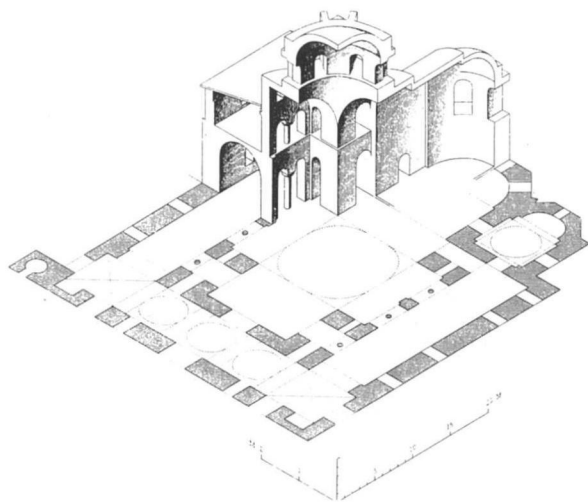


Fig. 4.11 Thessalonike, Hagia Sophia, isometric view. Constructed during the Byzantine "Dark Ages" (seventh–eighth centuries), the church might be regarded as a smaller, heavier version of Constantinople's Hagia Sophia, with the architectural forms of the Great Church reduced and simplified. New to Byzantine architecture in this period are the *pastophoria*, the two apsed chapels flanking the bema. (from A. Choisy, *L'art du bâtir chez les Byzantins* [Paris, 1883], pl. xxiii)

an attempt to maintain certain elements from Justinian's church, but with a modified scale.¹²

Following the period of Iconoclasm, the Byzantine church emerged as a compact, standardized entity, with numerous common features. Most churches were built of brick and stone and, like Hagia Sophia, they were vaulted. This both modulated the interior space and made the buildings more permanent: the risk of fires was always present because the lighting of lamps and candles was a necessary and important part of devotion. A typical example is the Myrelaion church from Constantinople, built around 920 by the emperor Romanos Lekapenos (Figs. 4.12–4.14).¹³ The church was a private foundation, adjoining a mansion owned by Romanos. The complex was later converted to a nunnery, and the church was used for the burial of Romanos and members of his family.

In most Middle Byzantine churches the sanctuary is both more complex and more intimate than it was during the sixth century or earlier (Figs. 4.13 and 4.15; compare 4.7). Divided into three parts, each area terminated in a semicircular apse. The central area was called the bema, and its main feature was the altar, often topped by a canopy. Within the curve of the apse there was sometimes a bench for the clergy to sit, but the stepped synthronon had been abandoned; the number of concelebrating clergy was apparently reduced. The elimination of the bishop's throne may reflect the decline in spontaneous preaching, which was replaced by readings.

To the left, or north, of the bema was the *prothesis*, where the communion was prepared and where the eucharistic vessels were stored. To the south was the *diakonikon*, which housed liturgical vestments and sacred texts. These were actually functional extensions of the bema. Architecturally the three spaces were similar; they were interconnected, and normally all three opened into the main worship space as well. Visually the sanctuary was cut off by a *templon* or *iconostasis*, which gradually became more opaque as the sacred nature of the liturgy was emphasized. In later centuries this screen held the major icons of the church (see Figs. 3.14, 3.17, and 3.20).¹⁴

The Early Christian atrium was eliminated, but the narthex still provided a transition



Fig. 4.12 Constantinople (Istanbul), Myrelaion, view of the exterior from the north. Built by the emperor Romanos Lekapenos, the early tenth-century church was raised on tall substructures to adjoin his family palace. It became Romanos's final resting place. Subjected to a disastrous restoration in the 1960s, the building has recently been restored once again and now reflects something of its original form. (R. Ousterhout)

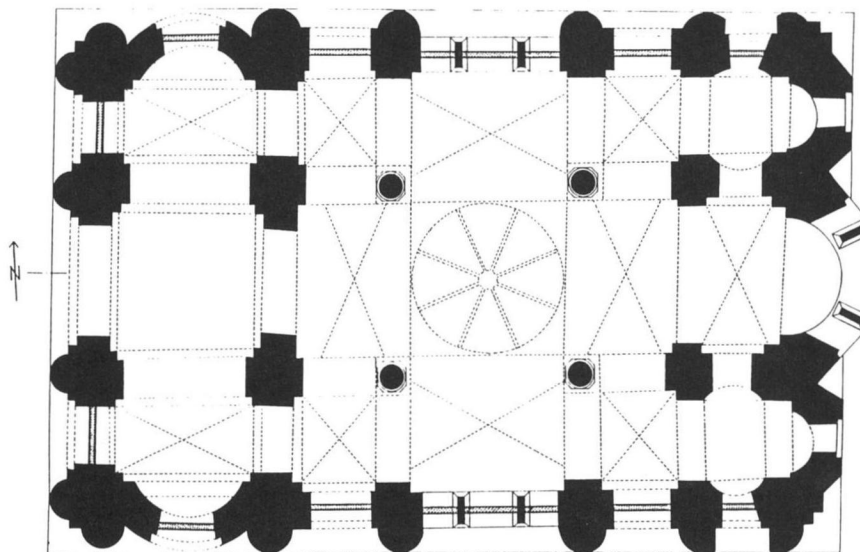


Fig. 4.13 Constantinople (Istanbul), Myrelaion, plan. A textbook example of the cross-in-square church, the nine-bay naos is squarish in plan, balanced by a three-part sanctuary to the east and a narthex to the west. The semicircular pilasters on the exterior reflect the structural system and the spatial divisions of the interior. (after C. L. Striker, *The Myrelaion [Bodrum Camii] in Istanbul* [Princeton, 1981], fig. 19)

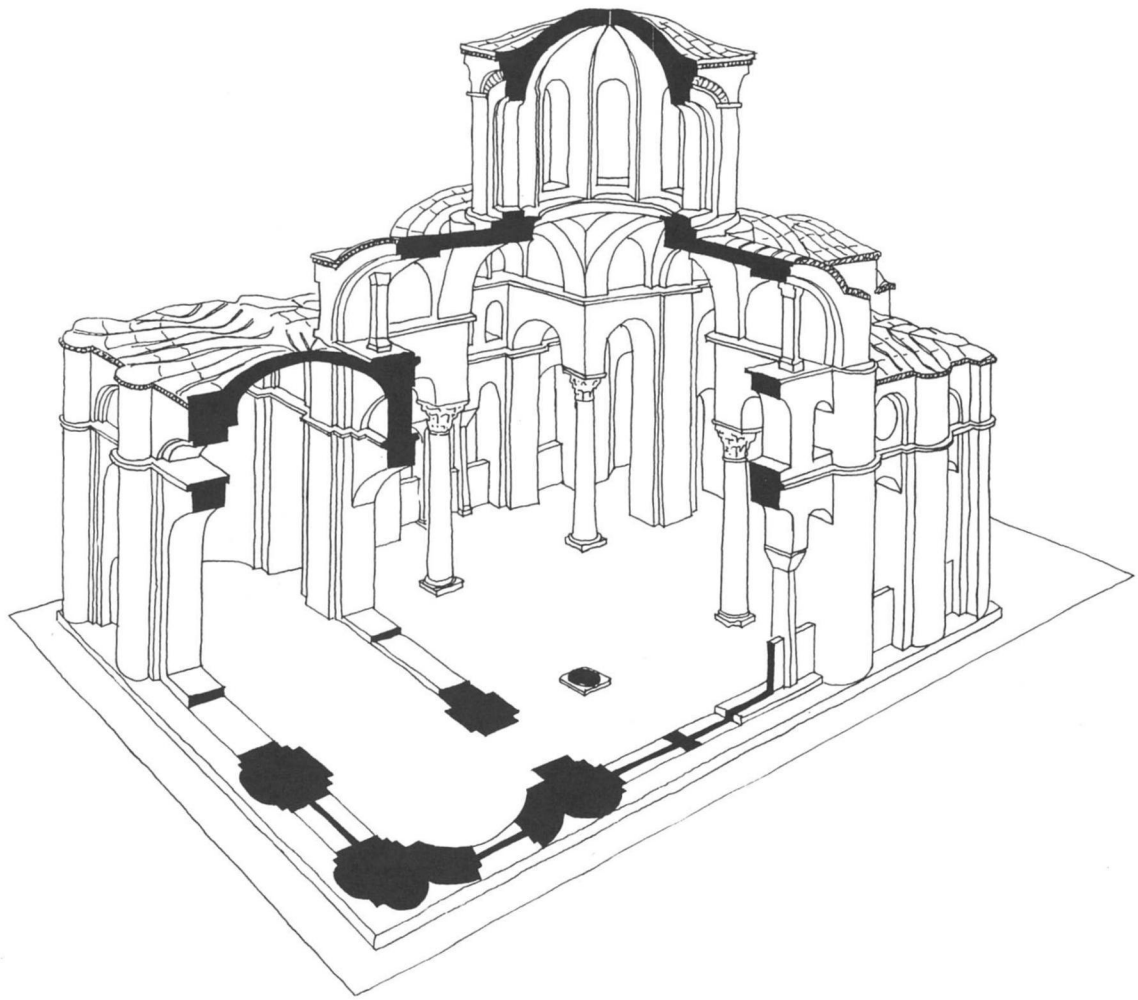
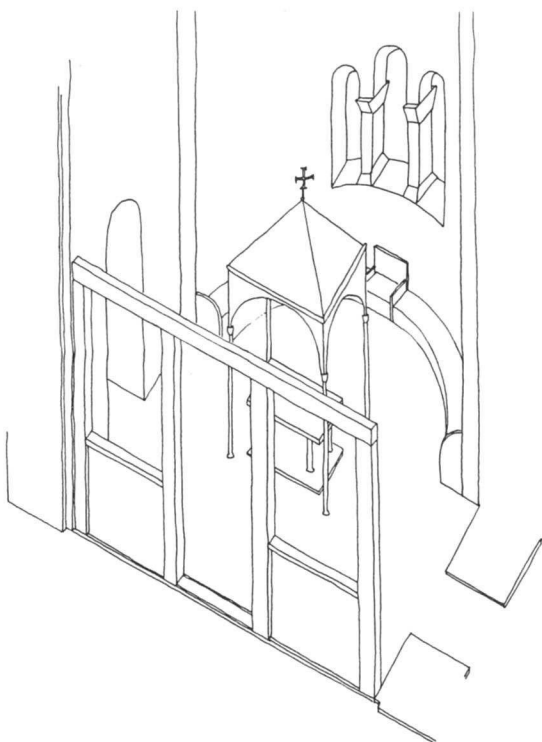


Fig. 4.14 Constantinople (Istanbul), Myrelaion, perspective view. The cross-in-square format creates a cascading effect on the exterior and a hierarchy of spaces on the interior; the central dome, raised on a drum, is given greatest prominence, followed by the apse and the cruciform unit that braces the dome. The roofs over the corners of the naos and over the narthex and pastophoria are lower still. (redrawn after C. L. Striker, *The Myrelaion [Bodrum Camii] in Istanbul* [Princeton, 1981], fig. 29)

from the exterior (Fig. 4.13). Sometimes in monasteries the narthex was expanded in size to provide additional room for the beginning of processions held on special occasions, such as baptisms, burials, and services in honor of the dead. With additional functions assigned to the narthex, sometimes an additional outer narthex or porch was added farther to the west. Between the narthex and the sanctuary was the main worship space of the church, called the naos, from the ancient Greek word for temple. Its function was similar to that of the nave of an Early Christian church, but the term nave is used for longitudinally planned spaces, whereas naos implies a more centrally planned space. Here the congregation would gather for the liturgy. Squarish in plan, the naos could take on a variety

Fig. 4.15 Diagram of a Middle Byzantine sanctuary. Compared to the Early Christian sanctuary in Figure 4.7, the Middle Byzantine sanctuary has retreated from the naos and has been given a greater degree of separation, reflecting changes in the nature of Byzantine Orthodox worship. (R. Ousterhout)



of forms, often subdivided by piers and columns. Like Hagia Sophia, the most characteristic feature of the naos is also the dominant feature of the architecture, the centrally positioned dome that focuses attention on the space immediately beneath it. And like Hagia Sophia, the dome creates something of a sense of directional ambivalence in the interior. In pure planning terms, an axis is formed leading from the entrance to the apse. In contrast, the dome creates a central focus, a vertical axis. The same dual orientation occurred in Hagia Sophia. Thus most Byzantine churches juxtapose longitudinal and centralized planning schemes.

This architectural juxtaposition actually conformed with the necessities of the mature Byzantine worship service. There were really two performance areas.¹⁵ The more sacred activities were restricted to the bema, centered on the altar, while other activities took place in the central space of the naos. The solea and ambo had been eliminated, and the scriptures and homilies were read at the door of the templon, below the dome. The processional nature of the Early Christian service had been eliminated, which helps explain the transformation from the longitudinally planned basilica to the centrally planned naos. The liturgy was reduced to a series of appearances, and for most of the service the templon effectively separated the clergy and the congregation. The centrally positioned naos dome highlighted the ceremonial appearances of the celebrants. Active participation of the congregation was greatly decreased. The service began with antiphons rather than processions, and it ended with the distribution of sanctified bread rather than communion, which was celebrated only rarely.

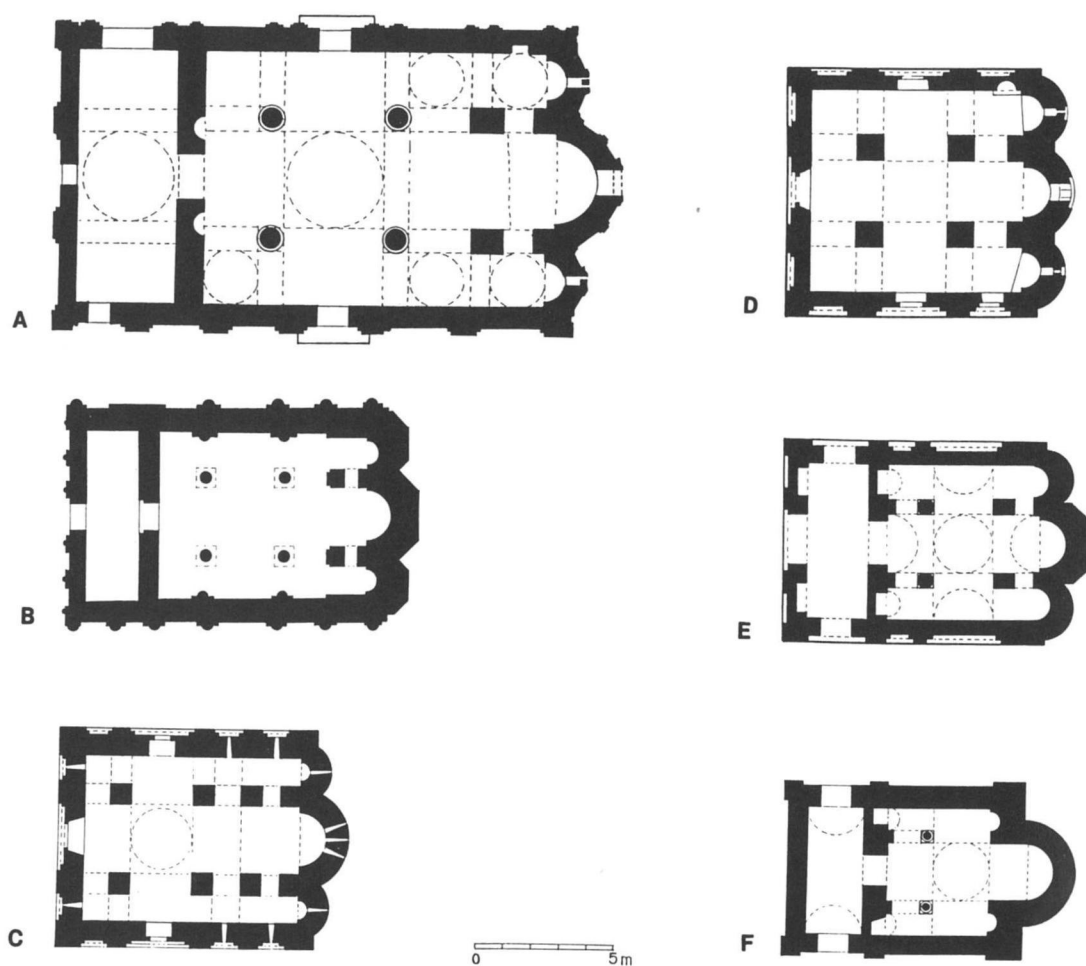


Fig. 4.16 Plans of six cross-in-square churches from Bulgaria. The diversity in Byzantine church planning may be related to the flexibility of the cross-in-square scheme. The variety found in the Bulgarian churches of the Middle and Late Byzantine periods is characteristic of Byzantine church architecture in general. A: Nesebar, Saint John Aliturgitos; B: Bjäl Brag, church no. 1; C: Kolusa, Saint George; D: Zemen monastery, Saint John Theologos; E: Preslav, church no. 4 at Seliste; F: Preslav, church no. 3 at Seliste. (R. Ousterhout, after K. Mijatev, *Die mittelalterliche Baukunst in Bulgarien* [Sofia, 1974])

To house such a service, the Byzantine architect had a number of variables with which to work.¹⁶ Curiously, the greatest variations occur in the naos, perhaps because this was the part of the church that gave it an individual expression. From the ninth century onward, the most common type was what is called the cross-in-square or four-column church, as typified by the Myrelaion church (Figs. 4.13 and 4.14). In this system, the interior spaces were carefully modulated, and a pyramidal massing of forms was developed, with the vaulting cascading down from the high dome. Normally the dome was raised on a drum, to allow a ring of windows around its base, helping to concentrate the natural light at the center of the church. Below this, vaults extended outward in four directions; this is the cross, set within the square of the plan below. The cruciform element provided the bilaterally symmetrical buttressing for the dome that was lacking at Hagia Sophia.

The eastern arm connects with the vault of the bema. Below, the dome was supported on four columns or piers that subdivide the interior space into nine units, or bays. The four corner bays of the naos are the smallest and have the lowest vaults. Normally these would correspond with the vaulting heights of the narthex to the west, and the prothesis and diakonikon to the east.

It was common for these internal spatial and structural divisions to be expressed on the exterior as well. The blind arcades (closed arches) of the facade correspond with the heights of the vaults inside. There is a great clarity and rationality to this system. The system was also flexible, as we can see in the plans of several cross-in-square churches from Bulgaria (Fig. 4.16). Piers could replace columns for greater stability; or the plan could be shortened so that the eastern corners of the square merged with the tripartite sanctuary; or it could be reduced even further, to a two-column plan.

While flexible, there was a certain sanctity associated with these forms that exceeded their structural or functional roles. This may explain the consistency in Byzantine church planning. This also explains why in an area like Cappadocia, in central Turkey, where the churches were carved into the soft rock formations, the standard church plan was often maintained. Being carved rather than built, a rock-cut Cappadocian church could have taken on any form; structural elements like columns and domes were unnecessary for stability. But the forms were sacred: this was how a church was meant to be. In some, like the Saint Barbara church in Göreme, the artist painted the vaults to look as if they were constructed of blocks of stone (Fig. 4.17).¹⁷

Of course, in a Byzantine church the architecture was only a portion of the final product. Architecture is by its nature abstract, and to bring it into an understandable context, a Byzantine church was decorated with frescoes or mosaics. Many, like the Myrelaion, have lost their decoration. In Istanbul and elsewhere in Turkey churches were converted to mosques, and the Christian decorations were suppressed. These churches were given prayer niches to reorient them to Mecca and minarets (towers) for the call to prayer (Figs. 4.1, 4.2, and Color Plate I). Originally the Byzantine church and its decoration functioned together, the one enhancing the other, forming a total work of art.

The pyramidal system of the cross-in-square church lent itself to an expression of the hierarchical system of Orthodox belief. Thus, as a common church type was developed, a common system of decoration followed.¹⁸ The church was viewed as having three zones, with the most sacred at the top. The dome, with its connotations of heaven, was reserved for the holiest figure, Christ, usually represented as a bust in a roundel. One Byzantine writer explains the image like this: "On the very ceiling is painted in colored mosaic cubes a man-like figure bearing the traits of Christ. Thou mightest say He is overseeing the earth, and devising its orderly arrangement and government, so accurately has the painter been inspired to represent . . . the Creator's care for us."¹⁹ This image of Christ is usually called the Pantokrator, or Ruler of All. If we recognize the dome as the central feature in the design of the church, we can view the figure of Christ as enveloping or embracing the congregation below. In the drum of the dome Christ is surrounded by his acolytes: apostles, angels, or prophets. The second most important space, the apse, is normally devoted to the Virgin Mary, usually holding the Christ child and often flanked by angels.

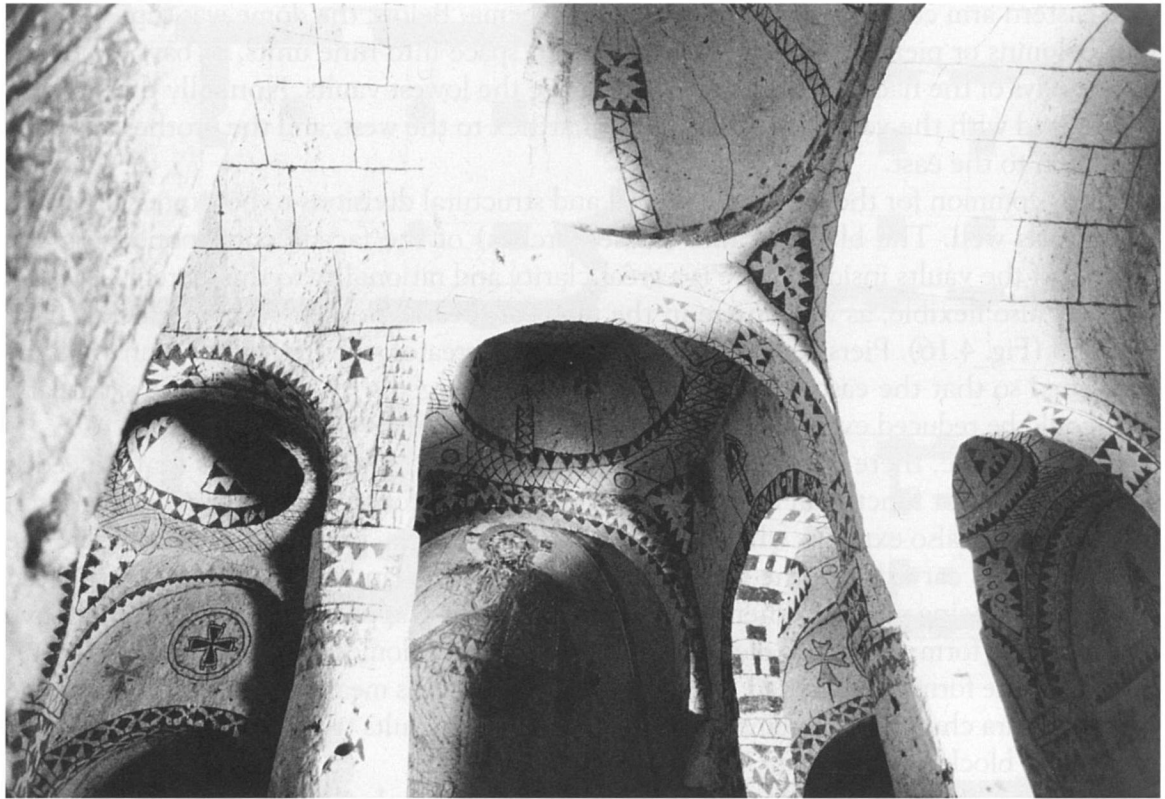


Fig. 4.17 Göreme, Saint Barbara church, interior view. Although carved from the living rock, the cave churches of Cappadocia reflect the forms of built architecture: many include such features as columns "supporting" a dome. In this naively painted example, the barrel vaults are detailed to suggest ashlar construction. (R. Ousterhout)

The second of the zones is used for narrative scenes of the life of Christ. This is sometimes called the Feast Cycle or Festival Cycle, because it forms a cycle of the major celebrations of the church.²⁰ These scenes commonly appear in the vaults of the cross-arms, and in the narthex. Their inclusion helped to transform the church mystically into an image of the Holy Land that had witnessed these events.

The final zone comprised the Choir of Saints—as a Byzantine writer described it, the "choir of apostles and martyrs and prophets and patriarchs fill the naos with their holy icons."²¹ These were frequently grouped by type: sainted priests, church fathers, and patriarchs appeared in or near the apse; the martyrs in the naos; holy monks in the western part of the church. These could be busts, half-length portraits, or life-size standing figures. Often unframed, they seem to occupy the same space as the viewer; in effect they became a part of the congregation that peopled the church.

How did the Byzantine viewer regard all this? So decorated and so arranged, the church could become the image of heaven, or of the cosmos, or of the Holy Land. It was a symbolic and flexible framework whose meanings shifted with the ceremonies it housed, a vessel to enhance and to comment on the ritual. This is how the eighth-century patriarch Germanos interpreted the church:

The church is a heaven on earth wherein the heavenly God "dwells and walks." It typifies the Crucifixion, the Burial and the Resurrection of Christ. It is glorified above Moses' tabernacle of testimony. . . . It was prefigured by the Patriarchs, foretold by the Prophets, founded by the Apostles, and adorned by the Hierarchs.

He then explains the symbolism of its various parts:

The conch [of the apse] is after the manner of the cave of Bethlehem where Christ was born, and that of the Cave where He was buried. . . . The holy table [the altar] is the place where Christ was buried, and on which is set forth the true bread from heaven, the mystic and bloodless sacrifice, i.e., Christ. . . . It is also the throne upon which God, who is borne up by the cherubim, has rested. At this table, too, He sat down at His last supper.²²

This flexible symbolism helped to transport the worshiper, to create a sense of the "real presence" of the events commemorated or ceremonially reenacted in the worship service.

This same system of decoration was employed in some of our most graceful Byzantine churches, such as the Katholikon (main church) of the monastery of Hosios Loukas near Phokis in Greece, from the early eleventh century.²³ The monastery had two adjoining churches: the other, slightly earlier, was a cross-in-square church dedicated to the Virgin (Fig. 4.18). Below the Katholikon was a large funeral crypt, which originally housed the wonder-working tomb of the Blessed Luke, the tenth-century founder of the monastery. In the Katholikon the proportions of the naos are expanded: a large dome is supported on eight piers positioned around the perimeter of the naos, and a greater sense of spatial unity is achieved (Figs. 4.19 and 4.20). This type of building is sometimes called a domed-octagon church. It includes cross-arms with windows, and smaller chapels are positioned on two levels in the corners. The proportions are also tall through the wall area, and the dome is a hemisphere, without a drum (Fig. 4.21). Most of the wall area is or was covered with colored marbles—this was standard in the wealthier churches—and the mosaic scenes appear high above the viewer, in the level of the vaulting.

At Hosios Loukas the dome mosaic has been lost, replaced by a post-Byzantine fresco, but the original impression can be reconstructed with the help of the Katholikon of Daphni monastery, built at the end of the eleventh century just outside Athens (Fig. 4.22).²⁴ Its dome mosaic of Christ in Heaven (Color Plate V) is large, impressive, and perhaps over-restored. Except for the dome, however, Hosios Loukas is the best place to get a sense of a Byzantine interior: as was standard, all surfaces that were not in themselves decorative were decorated, covered with revetment, carving, gold or silver plate, mosaic, or fresco. And we can only imagine the opulent impression of the interior with its complete liturgical furnishings: silk curtains, altar cloths, vestments, chandeliers and candelabra, icons—some on separate stands—and so on. By our standards, this may seem garish. One Byzantine viewer indeed complained about such a lavishly decorated church: "In one respect only do I consider the architect of the church to have erred, namely that hav-

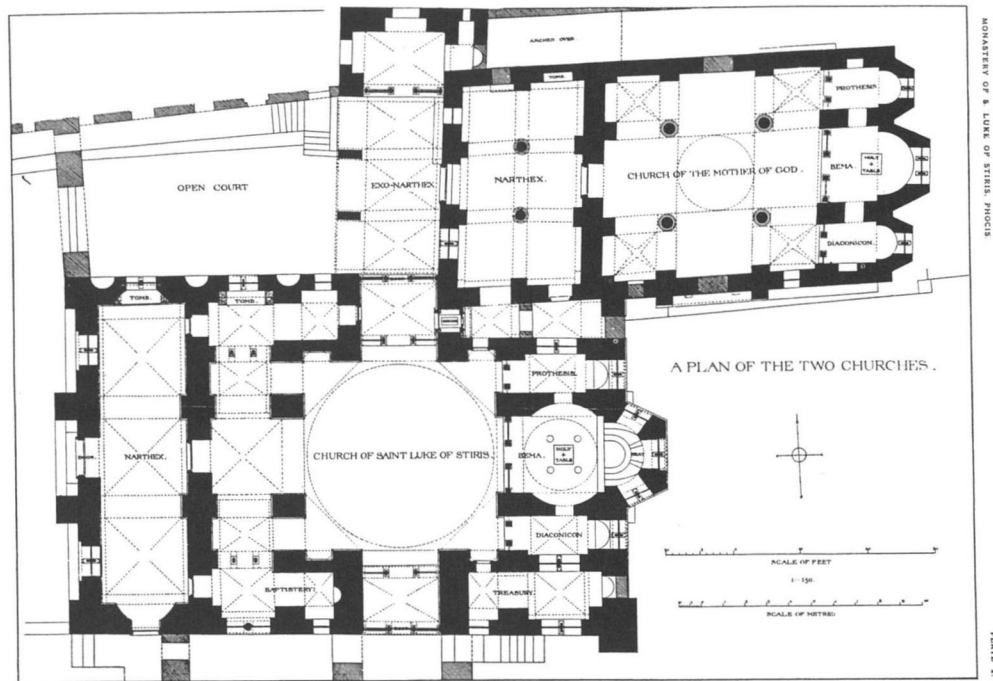


Fig. 4.18 Stiris (Phokis), Hosios Loukas monastery, plan of Theotokos church and Katholikon. Both churches introduced new architectural forms into Greece, presumably from Constantinople. The Theotokos church (Church of the Mother of God), from the late tenth century, is the oldest example of the cross-in-square type in Greece. The plan is actually a parallelogram—its builders failed to square off the corners. The larger and more complex Katholikon (Church of Saint Luke of Stiris), from the early eleventh century, is the oldest surviving example of the Greek-cross domed-octagon type, with the naos unified under a large dome. At the juncture of the two churches, relics of the Blessed Luke, the revered founder of the monastery, were displayed. A funerary crypt, unique in form, lies below the Katholikon. (after R. W. Schultz and S. H. Barnsley, *The Monastery of Saint Luke of Stiris* [London, 1901], pl. 1)

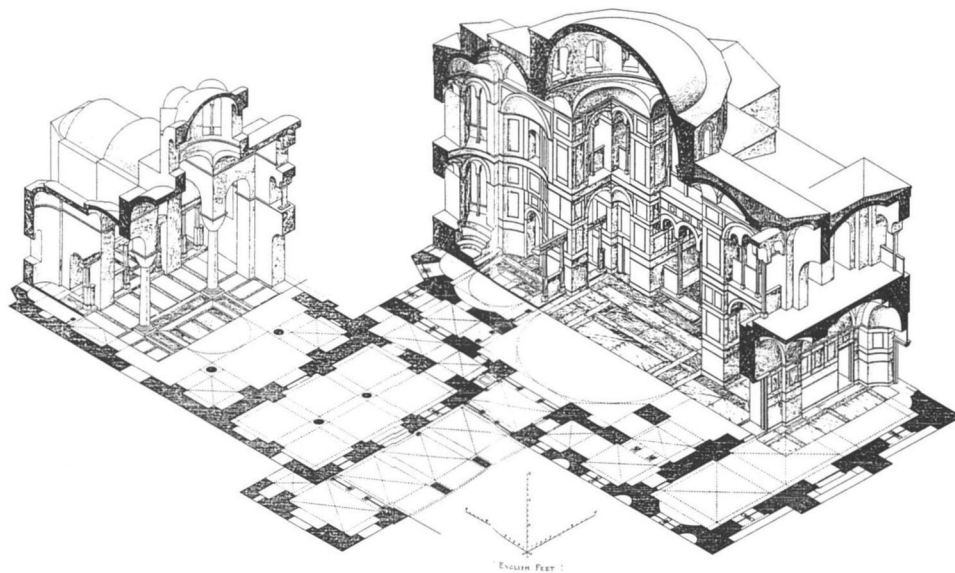


Fig. 4.19 Stiris (Phokis), Hosios Loukas, Katholikon, isometric view. In contrast to the cross-in-square plan of the Theotokos church, the more complex design of the Katholikon utilizes squinches in the transitional zone, and its dome rests on eight points of support. The proportions of the church are attenuated through the wall zone, whereas the dome is hemispherical, without a drum. (after R. W. Schultz and S. H. Barnsley, *The Monastery of Saint Luke of Stiris* [London, 1901], pl. 4)

Fig. 4.20 Stiris (Phokis), Hosios Loukas, Katholikon, interior of the naos looking north. The lavish interior decorations survive in remarkably complete condition, with marble revetments on the walls and mosaics in the vaults of the naos; for details of the mosaics, see Color Plates III, IV.A, IV.B, and Figures. 5.6, 5.8–5.12. The subsidiary chapels and the crypt were decorated in fresco. (R. Ousterhout)



ing gathered into one and the same spot all kinds of beauty, he does not allow the spectator to enjoy the sight in its purity, since the latter is carried and pulled away from one thing by another, and is unable to satiate himself with the spectacle as much as he may desire.”²⁵

Hosios Loukas also shows us how art and architecture interacted. Mosaic works best on curved surfaces: the gold and glass pieces form tiny mirrors, picking up the light from all angles and suffusing the interior with a golden glow. The complexities of the vaulting are not simply structural but were meant to create a dynamic setting for mosaic. Because the surfaces are curved, a sense of space is developed in the mosaic scenes. This is best seen in the squinches, the corbeled arches that make the transition from square to octagon at the corners of the naos below the dome. The two sides of the squinches join at a 90-degree angle, and the figures represented on each surface face each other across the void (Figs. 4.21 and 4.22). In effect, the figures are not behind a picture plane, but are occupying the same space as the viewer. The Byzantine church was a container that was not just lined with, but was inhabited by, its decoration.

A unified and monumental interior could be created without resorting to such an exotic plan as that of Hosios Loukas. At the Chora monastery in Constantinople (now known as the Kariye Camii), for example, the archaeological evidence indicates that a cross-in-square church built in the eleventh century collapsed shortly after construction.²⁶ It was rebuilt in the twelfth century, maintaining the original dimensions



Fig. 4.21 Stiris (Phokis), Hosios Loukas, Katholikon, interior of the naos, view of the vaulting. Scenes from the life of Christ are represented in the squinches, and the Virgin appears in the apse. Much of the mosaic decoration survives, although the fresco in the naos dome dates from the end of the sixteenth century. See Color Plates III, IV.A, IV.B, and Figures. 5.4–5.6, 5.8–5.12. (R. Ousterhout)

but altering the plan (Fig. 4.23). Instead of columnar supports for the dome, massive and more stable piers were added in the corners of the naos, creating a cruciform plan and supporting a larger dome on arches (Fig. 4.24). The bema was also widened accordingly. The resulting interior is spacious and light-filled. The four-column format could easily support a small dome, but beyond about a twenty-foot (6-m) diameter the system becomes increasingly unstable, particularly in an area disturbed by earthquakes. The creation of the new plan at the Chora, then, was in response to the specific necessities of the site. Aesthetically satisfying, this new plan was frequently imitated in the twelfth century and later.

The Lavra monastery on Mount Athos, from the late tenth century, shows another example of the creation of a new building type by modification of an existing church, this time in response to the functional requirements of monastic worship (Fig. 4.25).²⁷ The naos of the Katholikon was originally rectangular and had pier supports rather than columns. The monastic service included antiphonal singing by two choirs of monks, and



Fig. 4.22 Daphni monastery, Katholikon, interior of the naos, view into the dome. The church at Daphni is a simplified version of the naos of Hosios Loukas. Similarly decorated in mosaic, the expanded program includes framed panels on the upper walls (see Figs. 5.13–5.21, 5.23–5.28). The image of the Pantokrator dramatically fills the apex of the dome: compare Color Plate V. (R. Ousterhout)

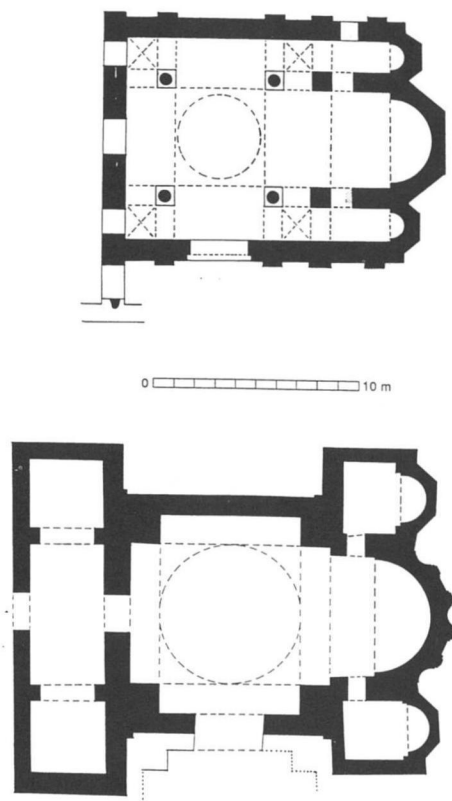


Fig. 4.23 Constantinople (Istanbul), Chora monastery, plans of the eleventh-century (top) and twelfth-century (bottom) churches. Both periods of construction are known only incompletely, based on excavation. Apparently following an earthquake, the cross-in-square church was redesigned as a more stable atrophied Greek-cross church, with stout corner piers supporting a larger dome. (R. Ousterhout)

to accommodate these, the lateral walls of the naos were opened up and apses were added to create a three-lobed plan (Figs. 4.26 and 4.27). The lateral apses were, in fact, called *choroi*, or choirs. A drawing (Fig. 4.28) by an eighteenth-century Russian visitor shows a service in progress with the monastic choirs in place. The adapted plan of Lavra seems to have worked well, as it was copied at least nineteen times in the other monasteries of Mount Athos, and innumerable times throughout the Balkans.

Such functional necessities led to the creation of more complex planning schemes as well. Almost as soon as planning types became standard, they were adapted to serve new functions through the addition of subsidiary chapels. Very quickly additional chapels were incorporated into the formal organization of the building.²⁸ At Lavra, for example, domed chapels were added flanking the narthex, and they were treated as miniature four-column churches (Fig. 4.26). Because the functions of chapels often mirrored on a small scale the functions of the naos, it follows that elements of the plan are repeated.

The church dedicated to the Virgin in the Lips monastery in Constantinople, built in the early tenth century, was one of the most complex examples (Figs. 4.29 and 4.30).²⁹ The core was a simple cross-in-square church. In order to provide places for the private devotions of the monks, six chapels were added: two flanking the sanctuary at the east end of the building, and four on the gallery level, at the corners of the plan. These upper chapels had domes arranged symmetrically around the taller naos dome, as seen in the reconstruction drawing. The increase of functional spaces on the interior was indi-



Fig. 4.24 Constantinople (Istanbul), Chora monastery, interior of the twelfth-century naos. Four narrow arches rise from the corner piers to support the dome, creating a unified interior and opening large wall areas in the lunettes for windows. The dome was rebuilt in the fourteenth century. (courtesy Dumbarton Oaks)

cated visually by the multiplication of apses along the east facade, and by the numerous domes.

At the tiny church of Saint Panteleimon at Nerezi in Macedonia, built in 1164, a five-domed plan was also used, but there the chapels are on the ground floor, replacing the corners of the naos, which is thus reduced to a cruciform plan (Figs. 4.31 and 4.32).³⁰ The eastern two domes are above the prothesis and diakonikon, while the western chapels, accessible from the narthex, seem to have been funerary in function: that to the north housed the tomb of the founder, a minor member of the imperial family. Burial of the founder, his family, and local saints were of major concern.

Returning briefly to Hosios Loukas, we should note that the organization of subsidiary chapels was similar, but they were positioned on two levels (Figs. 4.18 and 4.19). They had several functions: for burials, for private devotions, and one housed relics of the Blessed Luke.



Fig. 4.25 Mount Athos, Lavra monastery, Katholikon, general view from the south. Founded by Saint Athanasios in the late tenth century, the Katholikon of Lavra with its subsequent remodelings became the model for later monastic churches on Mount Athos and elsewhere in Greece and the Balkans. (courtesy P. Mylonas)

Such special concerns allowed for great complexity in Byzantine church planning. At the Pantokrator monastery in Constantinople, three churches were built side by side and one at a time in the early twelfth century by the Empress Irene and her husband, John II Komnenos (Figs. 4.33 and 4.34).³¹ The first to be constructed was the south church, dedicated to Christ Pantokrator, a cross-in-square with a broad narthex and lateral aisles. This was the Katholikon of the monastery, intended for the worship of the monks. In a second phase, the north church, dedicated to the Virgin Eleousa (Merciful or Compassionate Virgin), was added, its narthex connecting to that of the Katholikon. It adjoined the street and was used by laypeople coming from outside the monastery. Finally, the middle church, dedicated to the Archangel Michael, was sandwiched between the two. It was built as a dynastic mortuary chapel for the founders' family. During some ceremonies processions would pass from one church to another, but the major function of each was special. On the exterior, these multiple functions were expressed by the irregular row of apses and the hodgepodge of domes. Rather than seeking a unified monumental image, the multiple significance of the Pantokrator was expressed through complexity.

The same complex expression may be seen in numerous Late Byzantine churches, even those built in one construction phase. At the Holy Apostles in Thessalonike, from the early fourteenth century, the plan is fairly symmetrical, covering more than fifteen hundred square feet (Figs. 4.35–4.37).³² But less than one-third is occupied by the naos, and the internal space is subdivided into numerous smaller units. The north aisle functioned as a separate chapel, while the southeast corner housed a treasury. Domes were positioned over the corners of the building, even though they were not clearly related to the functional divisions of the interior. In fact, more emphasis is given to the exterior, lavishly decorated with arcades and brick patterning.

The monastery of the Chora in Constantinople was enlarged in the early fourteenth century by the statesman and scholar Theodore Metochites, and it demonstrates the

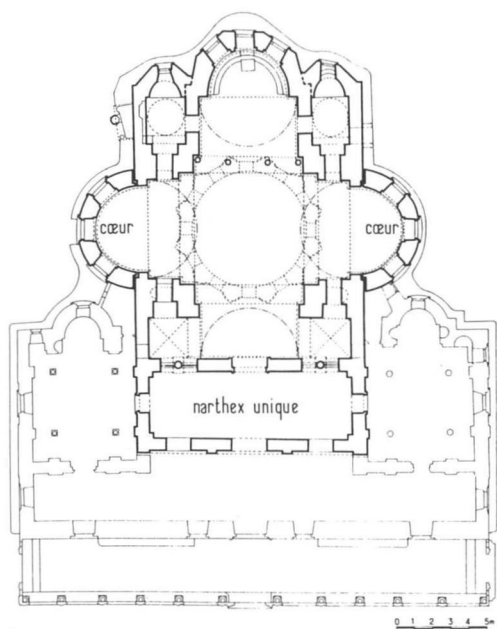


Fig. 4.26 Mount Athos, Lavra monastery, plan of the Katholikon. The original rectilinear building was expanded soon after completion by the addition of lateral *choroi* (choirs), providing additional space for the monastic worship service. Later modifications added domed chapels flanking the narthex, and a broad outer narthex farther to the west. All of these elements were imitated in later church constructions. (courtesy P. Mylonas)

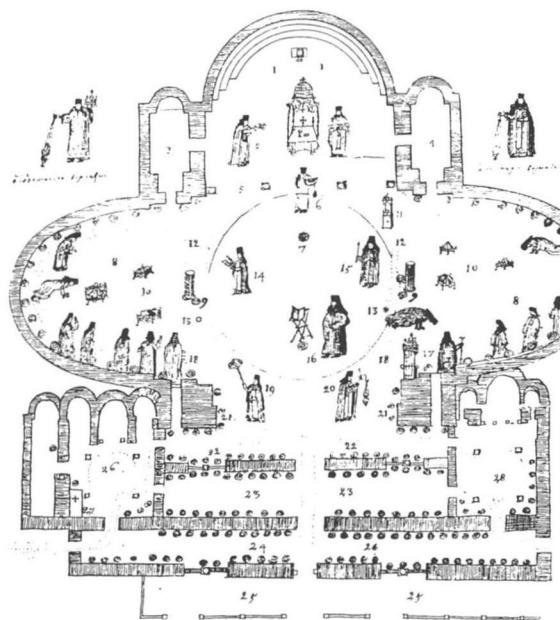


Fig. 4.28 Mount Athos, Lavra monastery, drawing showing a service in progress. As recorded by an eighteenth-century Ukrainian pilgrim, the monks positioned in the *choroi* sang the liturgy antiphonally across the central space of the naos. (drawing by Vasilii Grigorovich Barskij, in P. M. Mylonas, *Athos and Its Monastic Institutions Through Old Engravings and Other Works of Art* [Athens, 1963], no. 16)

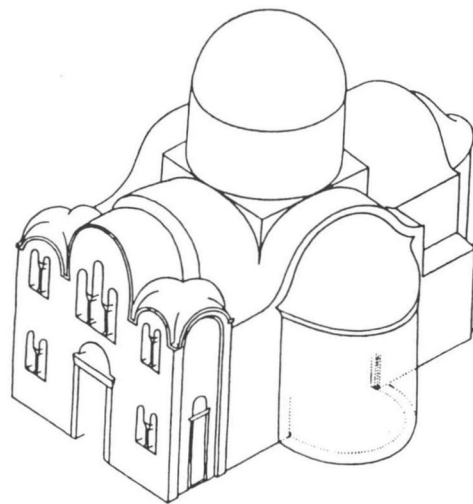
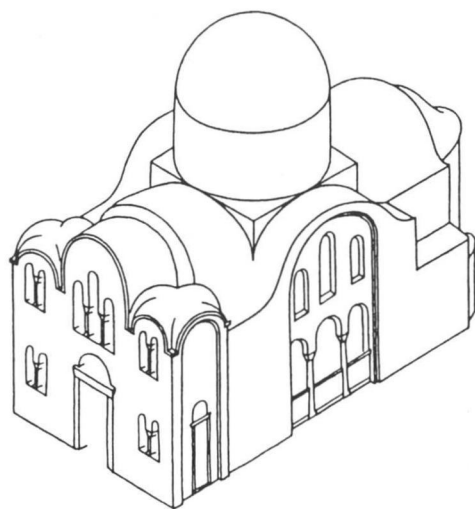


Fig. 4.27 Mount Athos, Lavra monastery, diagram showing transformation of the naos. In the first modification, the lateral walls of the naos were removed and replaced by apses. Cracks in the interior fresco decoration and the lack of bonding in the exterior masonry testify to the transformation. (courtesy P. Mylonas)

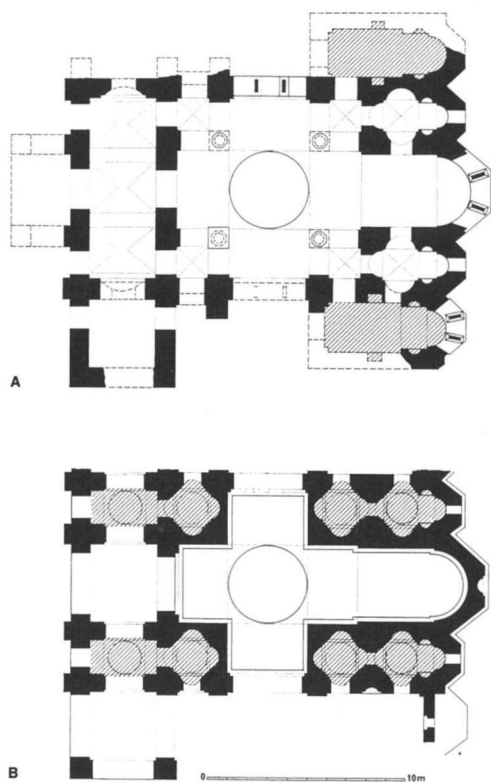


Fig. 4.29 Constantinople (Istanbul), Lips monastery, Theotokos church, plans at ground (A) and gallery (B) levels. The cross-in-square church, very similar in date and overall form to the Myrelaion (see Figs. 4.12–4.14), included six subsidiary chapels for the private devotions of the monks. Incorporated into the overall design, two of these chapels flank the pastophoria at the east end of the ground level, and four domed chapels are positioned at the corners of the gallery level. (courtesy S. Ćurčić)

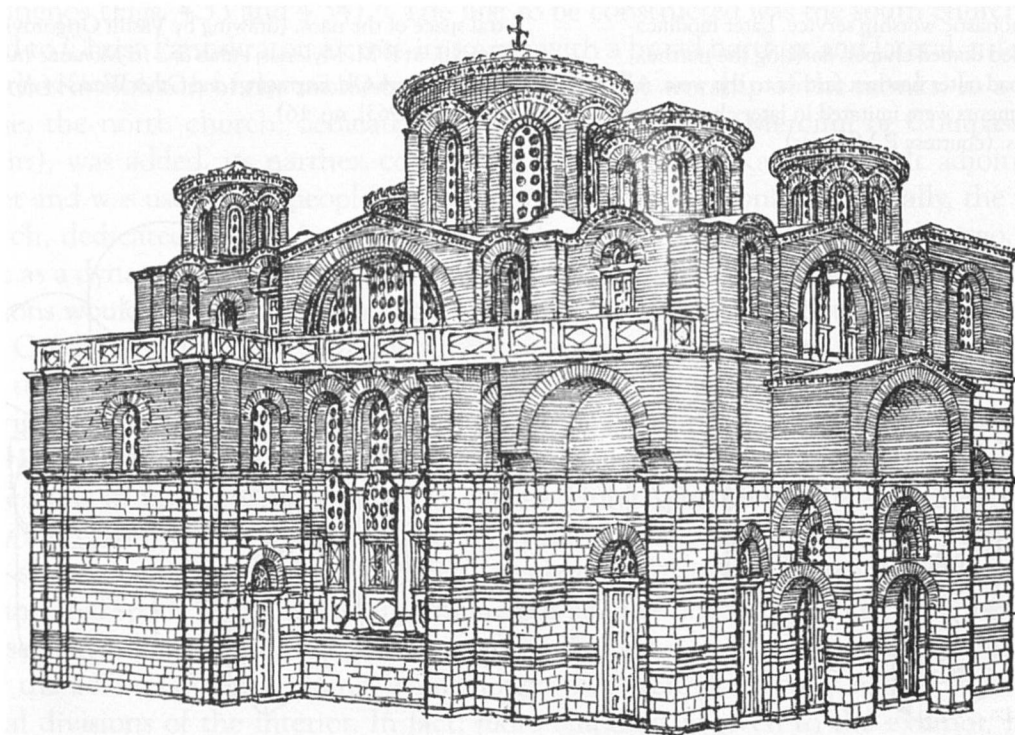


Fig. 4.30 Constantinople (Istanbul), Lips monastery, Theotokos church, reconstruction view. The building is topped by five domes, with the four subsidiary domes positioned diagonally in relation to the naos dome, creating a coherent overall design. (from A. H. S. Megaw, "The Monastery of Lips (Fenari Isa Camii) at Istanbul," *Dumbarton Oaks Papers* 18 [1964], 293, fig. G)



Fig. 4.31 Nerezi, Saint Panteleimon, general view from the south. Built by a minor member of the imperial Komnenos family, the five-domed form of this provincial church reflects examples from the capital, such as the Lips monastery church. (R. Ousterhout)

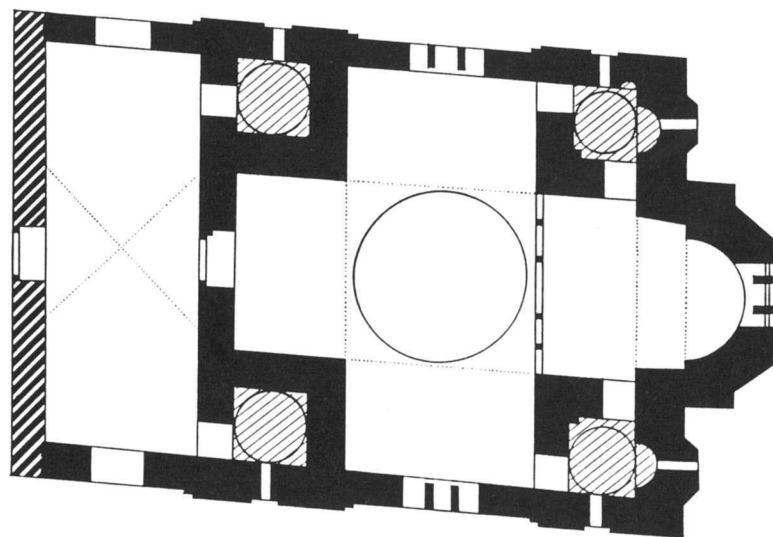


Fig. 4.32 Nerezi, Saint Panteleimon, plan. Minor domes are positioned above the pastophoria and above two tiny chapels accessible from the narthex. The northwest chapel may have held the tomb of the founder. (courtesy S. Ćurčić)

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Fig. 4.33 Constantinople (Istanbul), Pantokrator monastery, general view from the east. The three churches were built in succession in the twelfth century by the Empress Irene and the Emperor John II Komnenos. John's *Typikon*, or Rule, of 1136 provides a vivid picture of both public and private worship in the monastery, as well as arrangements for imperial burials. The east facade, visible from a great distance, proclaimed the complex significance of the church with its multifarious array of apses and domes. (T. Mathews, courtesy Dumbarton Oaks)

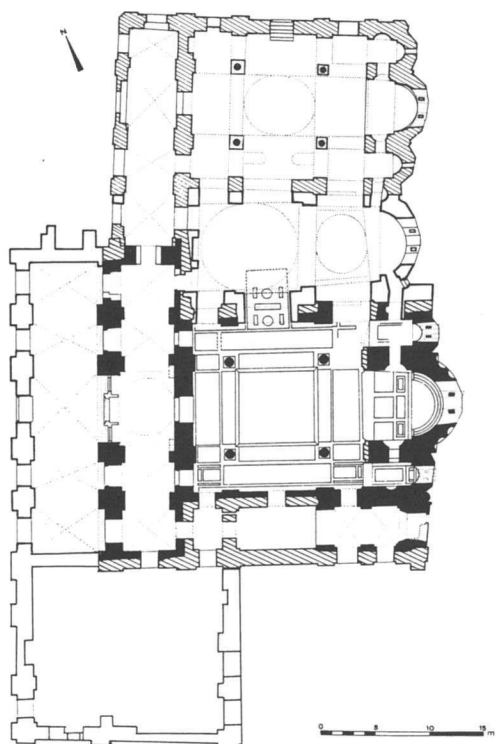


Fig. 4.34 Constantinople (Istanbul), Pantokrator monastery, plan. Each of the adjoining churches had a specific function: the south church was the primary site of monastic worship; the north church was public, served by a lay clergy and open to the street; and the twin-domed central church, called a *heroon* (hero shrine) in the monastery *Typikon* (Rule), was the mausoleum for the imperial family. (courtesy Dumbarton Oaks; redrawn after A. H. S. Megaw, "Notes on Recent Work of the Byzantine Institute in Istanbul," *Dumbarton Oaks Papers* 17 [1963], 333–371, fig. D)

Fig. 4.35 Thessalonike, Holy Apostles, general view from the southeast. Patriarch Niphon's church is in many ways typical of Late Byzantine architecture: complexity outweighs monumentality, and a hierarchy of function is expressed on the exterior. Although there was only one construction phase, the outer ambulatory appears as a separate element, not fully integrated into the building's design. (R. Ousterhout)

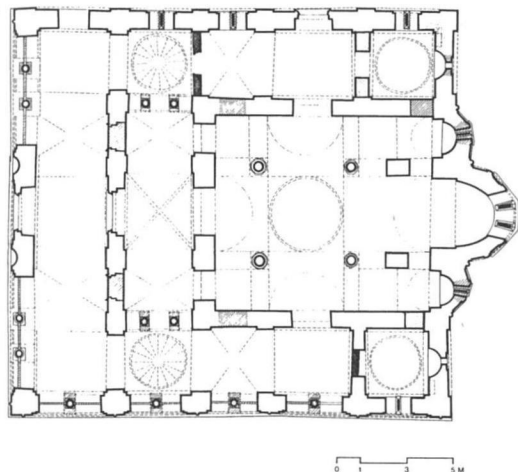
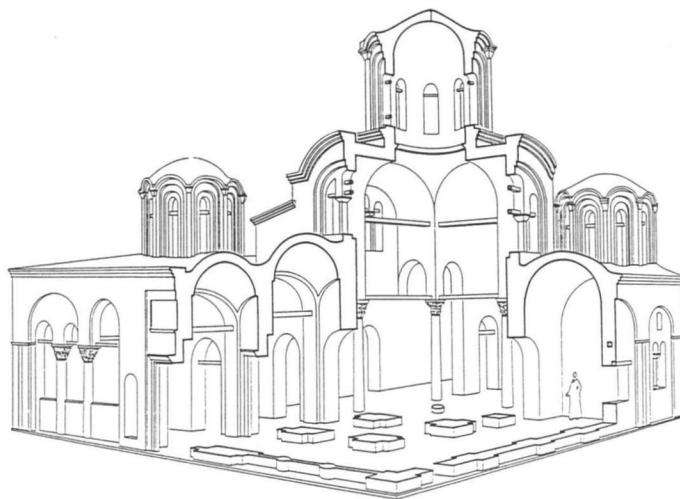


Fig. 4.36 Thessalonike, Holy Apostles, plan. A U-shaped ambulatory envelops the cross-in-square naos. Although symmetrical overall, the ambulatory included a chapel along the north side and a treasury in the southeast corner. The west and south facades were opened by arcades. (after G. Velenis)

Fig. 4.37 Thessalonike, Holy Apostles, perspective section. The core of the building is attenuated to give it greater visibility on the exterior, rising above the level of the ambulatory. The domes all rest on tall drums. (courtesy C. L. Striker)



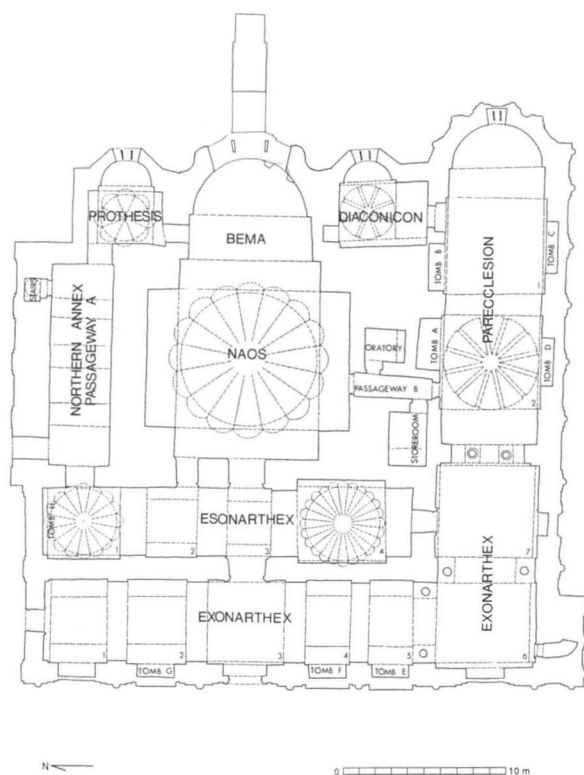


Fig. 4.38 Constantinople (Istanbul), Chora monastery, plan of the fourteenth-century church. The twelfth-century core of the church was enveloped by an irregular system of ancillary spaces, including two narthexes to the west, a two-storied annex to the north—perhaps a vestry surmounted by the monastic library—and a parekklesion, or funeral chapel, along the south side. All were part of a major renovation of the monastery undertaken by the statesman and intellectual Theodore Metochites. (R. Ousterhout)

state of the art in the capital (Figs. 4.38 and 4.39; compare Fig. 4.23).³³ Here no attempt was made at symmetry, and the numerous functional units received individual expression on the exterior, much like at the Pantokrator. The existing twelfth-century naos was enveloped on three sides by new construction, including a large funeral chapel, or parekklesion, to the south, complete with niches for burials. Two narthexes front the building and provided access to the various components. To the north was a two-storied annex, perhaps the library. A belfry—a feature found in Byzantine architecture only after the late twelfth century—once stood at the southwest corner. It is now replaced by a minaret. The relationships are easier to see in the reconstruction drawing (Fig. 4.40).

It is often thought that such architecture demonstrates the decline and incompetence of Byzantine building arts, because the plan was both irregular and asymmetrical. A closer analysis suggests instead that the designer was seeking a new aesthetic sensibility, with formal relationships that might be described as manneristic: consciously breaking fixed patterns, creating surprising juxtapositions in the relationship of parts to the whole. All of the parts are derived from standard Byzantine building elements, but the way in which they are put together is new. And the designer is remarkably successful, as is evident in the details of the building and in the relationship between the architecture and the decoration. For example, on the south facade of the Chora, alternate half-columns are illogically positioned below windows, as if supporting them. A column implies structure, but here it is in a position that denies its structural potential. Such il-



Fig. 4.39 Constantinople (Istanbul), Chora monastery, general view from the southeast. The facades are enlivened by niches, pilasters, and engaged columns. To the east, a flying buttress—one of the few in Byzantine architecture—braces the apse on unstable terrain. Along the south facade, the rhythm of supports is quickened, and stepped responds (pilasters behind a column) and half-columns appear to be illogically “supporting” windows. Taken out of their structural role, they become part of the manneristic decoration of the church. (R. Ousterhout)

logic would seem to be intentional, adding an element of intellectual tension to a visually attractive facade.

In the narthexes a curious system of domical vaults was introduced (Fig. 4.41). Normally groin vaults with triangular segments were used in narthexes, but the extensive narrative cycles of the lives of Christ and the Virgin required larger, flatter surfaces. In order to fit the domical vaults into the rectangular bays, extra arches were added, springing from the larger arches. While the solution seems a little odd, the extra arches provide surfaces for individual figures of saints. The added complexity enhances the decorative program and suggests a close working relationship between architect and artist.

In fact, throughout the building the relationship between architecture and decoration is noteworthy.³⁴ For example, the domed space at the south end of the narthex was apparently used as a place to honor the previous founders of the monastery, two of whom are pictured at the feet of Christ and the Virgin in a huge wall mosaic (Fig. 4.42). The holy figures are more than ten feet tall, and there is no way to get a good frontal view in the narrow space. But the view was directed toward the entrance of the narthex, and the fig-

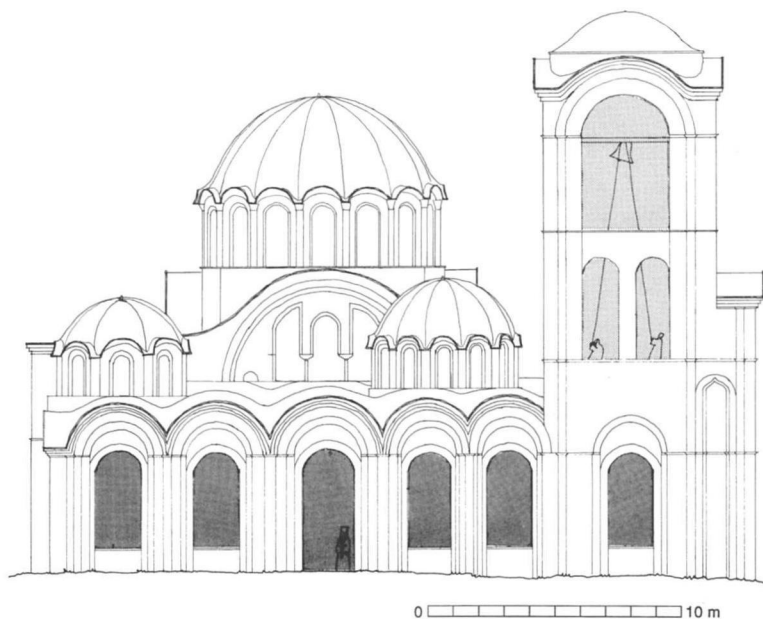


Fig. 4.40 Constantinople (Istanbul), Chora monastery, reconstruction drawing of west facade. Originally opened by a porticoed facade, the narthexes were topped by a scalloped roof line. The two narthex domes are positioned asymmetrically, reflecting the small-scale relationships given priority in the building's design. A large belfry once appeared at the southwest corner, indicating that symmetry was never a major concern of the builders. (R. Ousterhout)



Fig. 4.41 Constantinople (Istanbul), Chora monastery, interior, view of exonarthex looking north. The curious vaults have arches springing from arches to create a square that could be covered by a sail vault, in which the pendentives are extended to form a continuous curve. The vaults provided surfaces for narrative scenes in mosaic, whereas the arches were decorated with images of saints, organized according to the liturgical calendar. (courtesy Dumbarton Oaks)



Fig. 4.42 Constantinople (Istanbul), Chora monastery, interior of the narthex, view toward the Deesis mosaic. Designed to be viewed from the entrance to the narthex, the panel shows Isaac Komnenos, the twelfth-century founder of the Chora, and Melania the Nun, a Palaiologan princess and benefactor of the monastery, kneeling before colossal images of the Virgin and Christ, to whom the monastery was dedicated. (R. Ousterhout)



Fig. 4.43 Constantinople (Istanbul), Chora monastery, interior of the narthex, south dome. Christ in the medallion is surrounded by his Old Testament ancestors. The undulating interior surface of the pumpkin dome picks up the light from all angles. (courtesy Dumbarton Oaks)

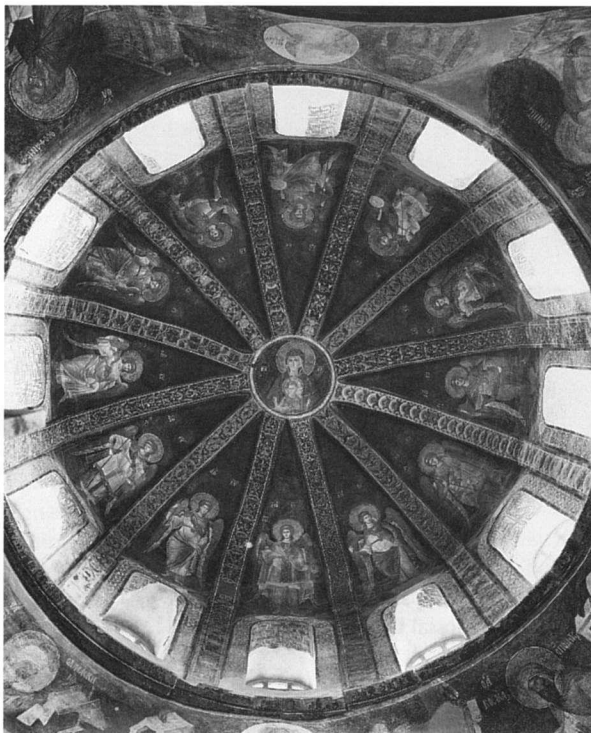


Fig. 4.44 Constantinople (Istanbul), Chora monastery, interior of the parekklesion dome. The Virgin in the dome is surrounded by a host of angels, while four hymnographers who dedicated hymns to the Virgin appear in the pendentives. The flat surfaces of the ribbed dome display the fresco decoration to best advantage. (courtesy Dumbarton Oaks)

Fig. 4.45 Constantinople (Istanbul), Chora monastery, interior of parekklesion looking east. Above the cornice line the western domed bay is decorated with Old Testament prefigurations of the Virgin, whereas the eastern bay is filled with images of the Last Judgment. The fresco program culminates in the Anastasis in the apse. On the wall surfaces below are standing figures of saints and a painted dado (lower border). The large arches to either side were for the burial of the founder, as well as members of his family and his colleagues. (courtesy Dumbarton Oaks)

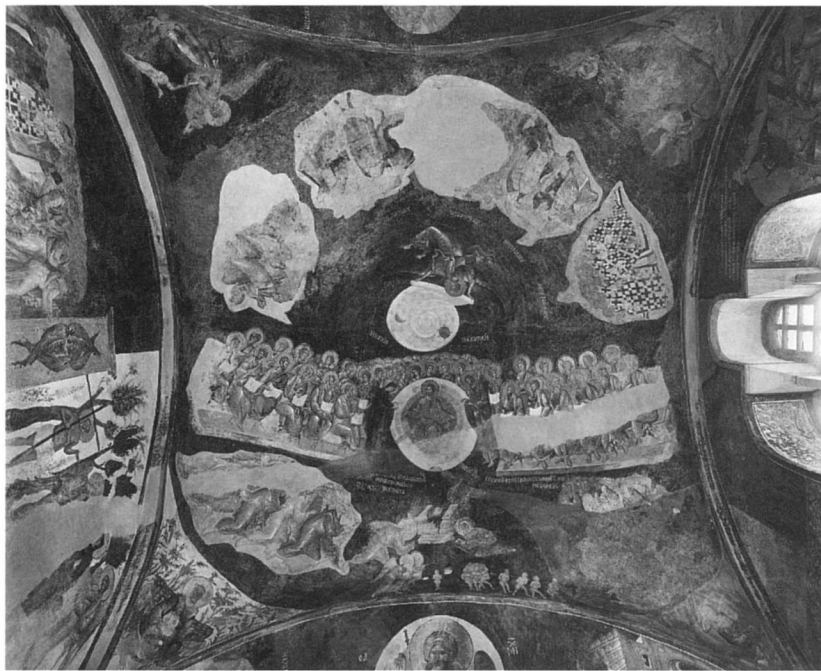


Fig. 4.46 Constantinople (Istanbul), Chora monastery, interior of parekklesion, domical vault with the Last Judgment. Christ is seated in judgment, flanked by the Virgin and John the Baptist who intercede for mankind. Below, angels weigh souls, sending the blessed to the bosom of Abraham, on Christ's right, and the damned to the torments of Hell, on his left. Above Christ, angels roll up the heavens on the Last Day. The large crack running through the vault is the result of structural damage to the building. (courtesy Dumbarton Oaks)

ures are optically corrected for this view: note that Christ and the Virgin are larger on the right sides than on the left, to counter the view from the left.

The domes in the building also show a sensitivity to the decorative media. Those in the naos and narthex are scalloped "pumpkin" domes, which create vibrant surfaces for mosaic (Fig. 4.43). In the parekklesion the dome is articulated with flat ribs instead: the flatter surface is better suited to the fresco medium (Fig. 4.44).

The parekklesion of the Chora is a good place to end this discussion, as it is one of the finest examples of Late Byzantine architecture, demonstrating the beauty of small-scale planning—what Richard Krautheimer called "architectural jewelry work"³⁵ (Fig. 4.45). The elongated chapel is topped by a dome, a domical vault, and the conch of the apse, the latter decorated with a magnificent fresco of the Anastasis, or Resurrection, showing Christ resurrecting Adam and Eve. Positioned above the small window of the apse, the light seems to emerge from the white robes of Christ. The vaults form a cascading display, and as the sensitive viewer enters, he or she automatically stops below the dome, where the light is concentrated and where the interior panorama is best observed. Immediately to the left of the viewer was the largest of the tombs in the parekklesion, that of its proud founder. Unconsciously, then, the architecture causes the visitor to pay homage to the builder.

Finally, the domical vault of the parekklesion is decorated with a scene of the Last Judgment (Figs. 4.45 and 4.46). Usually portrayed on a flat surface, the representation is rearranged here to fit the special setting. The result is unique: the domical vault, with its symbolic connotations of heaven, forms the perfect setting for this heavenly vision. Christ and the Elders face the viewer, with the weighing of souls below; the scene is balanced by an angel rolling up the scroll of heaven. The saved souls appear to Christ's right; to his left, the damned are led to their punishment. And as the dead were called from their tombs in this apparition, the founder and his family waited for their final judgment immediately below. We may note that the founder's tomb is on the right (or saved) side of Christ. The architectural setting helps to give the scene an immediacy and a sense of drama unique among Byzantine representations of the Last Judgment. It is not so much a fresco program set into an architectural space as an architectural space that has become an integral part of its decoration.³⁶

These examples from the Chora in Constantinople show how Byzantine art and architecture worked together to create a ritual setting. A Byzantine church did not simply house events and ceremonies, but became an intimate part of them. It molded the liturgical service and responded to it, both through the development of new plans and through its interaction with the figural decoration. Too often Byzantine architecture is reduced to typological formulas fixed into a tendentious evolutionary model. Above all, Byzantine architecture was a responsive architecture. The sensitivity to special functions, site requirements, and decorative programs have left us an architecture of countless variations on a theme. In the end, this may be the greatest contribution of Byzantine architecture.

NOTES

1. L. Sullivan, "Form Follows Function" (1901), later published in *Kindergarten Chats* (1918); for text see L. Roth, *America Builds* (New York, 1983), 347–349.
2. See comments by S. Kostof, *A History of Architecture: Settings and Rituals* (Oxford, 1985), 18–19.
3. Most influential has been the work of T. F. Mathews, particularly *The Early Churches of Constantinople: Architecture and Liturgy* (University Park, Pa., 1971).
4. See P. Blake, *The Master Builders* (New York, 1976), 200–284, *passim*.
5. A. Loos, "Ornament and Crime" (1908); cf. Kostof, *History of Architecture*, 16.
6. The literature on Hagia Sophia is voluminous; see most recently R. J. Mainstone, *Hagia Sophia: Architecture, Structure, and Liturgy of Justinian's Great Church* (New York, 1988).
7. For the Byzantine architect, see G. Downey, "Byzantine Architects: Their Training and Methods," *Byzantion* 18 (1946–48), 99–118.
8. Mathews, *The Early Churches of Constantinople*, 19–27.
9. Mathews, *The Early Churches of Constantinople*, 138–173, describes in detail the liturgical service.
10. Prokopios, *Buildings*, I.i.23ff.; all quotes from Prokopios are taken from C. Mango, *The Art of the Byzantine Empire, 312–1453* (Toronto, 1986), 72–78, esp. 76.
11. See W. Emerson and R. Van Nice, "Hagia Sophia: The Collapse of the First Dome," *Archaeology* 4.2 (1951), 94–103.
12. K. Theoharidou, *The Architecture of Hagia Sophia, Thessaloniki*, BAR International Series 399 (Oxford, 1988).
13. C. L. Striker, *The Myrelaion (Bodrum Camii) in Istanbul* (Princeton, 1981).
14. See L. Bouras, "Templon," *The Oxford Dictionary of Byzantium* (New York, 1991), 3: 2023–2024, with additional references.
15. See T. F. Mathews, "'Private' Liturgy in Byzantine Architecture: Toward a Re-Appraisal," *Cahiers archéologiques* 30 (1982), 125–138, repr. in his *Art and Architecture in Byzantium and Armenia* (Variorum, 1995), III.
16. See R. Ousterhout, "Beyond Hagia Sophia: Originality in Byzantine Architecture," in *Originality and Innovation in Byzantine Literature, Art, and Music*, ed. A. Littlewood (Oxford, 1995), 167–185.
17. S. Kostof, *Caves of God*, 2d ed. (Oxford, 1989), with further bibliography.
18. Still standard is O. Demus, *Byzantine Mosaic Decoration* (London, 1948); see also Chapter 5.
19. Photios, *Homily X.4ff.*, describing the church of the Virgin of the Pharos in Constantinople; translated in Mango, *Art of the Byzantine Empire*, 185–186.
20. The proper use of this term has been questioned: see T. F. Mathews, "The Sequel to Nicaea II in Byzantine Church Decoration," *Perkins Journal* 41.3 (1988), 11–23, repr. in *Art and Architecture in Byzantium and Armenia*, XII. E. Kitzinger maintains the term: "Reflections on the Feast Cycle in Byzantine Art," *Cahiers archéologiques* 36 (1988), 51–73.
21. Photios, *Homily X.4ff.*
22. Patriarch Germanos I, *Historia mystagogica*; in Mango, *Art of the Byzantine Empire*, 141–143.
23. For a recent summary of scholarship, see D. I. Pallas, "Zur Topographie und Chronologie von Hosios Loukas: Eine Kritische Übersicht," *Byzantinische Zeitschrift* 78 (1985), 94–107, and N. Oikonomides, "The First Century of the Monastery of Hosios Loukas," *Dumbarton Oaks Papers* 46 (1992), 245–256. On the cult of the Blessed Luke, see C. Connor, *Art and Miracles in Byzantium* (Princeton, 1991), whose dating may be refined with the recent investigations of P. Mylonas, in particular "The Complex of St. Luke of Stiris," *Archaiologia* 36 (September 1990), 6–30 (in Greek with extensive English summary).
24. D. Mouriki, "Stylistic Trends in Monumental Painting of Greece During the Eleventh and Twelfth Centuries," *Dumbarton Oaks Papers* 34–35 (1980–81), 94–98.
25. Photios, *Homily X.4ff.*, in Mango, *Art of the Byzantine Empire*, 186.
26. R. Ousterhout, *The Architecture of the Kariye Camii in Istanbul*, *Dumbarton Oaks Studies* 25 (Washington, D.C., 1987), 15–32.
27. P. Mylonas, "Le plan initial du catholicon de la Grande-Lavra au Mont Athos et la genèse du type du catholicon athonite," *Cahiers archéologiques* 32 (1984), 89–112.
28. S. Ćurčić, "Architectural Significance of Subsidiary Chapels in Middle Byzantine Architecture," *Journal of the Society of Architectural Historians* 36 (1977), 94–110.
29. A. H. S. Megaw, "The Original Form of the Theotokos Church of Constantine Lips," *Dumbarton Oaks Papers* 18 (1964), 279–298.
30. Ćurčić, "Architectural Significance of Subsidiary Chapels," 102.
31. A. Van Millingen, *Byzantine Churches in Constantinople* (London, 1912), 219–242, supplemented with A. H. S. Megaw, "Notes on Recent Work of the Byzantine Institute in Istanbul," *Dumbarton Oaks Papers* 17 (1963), 335–367; for the order of offices, see P. Gau-

tier, "Le typikon du Christ Sauveur Pantocrator," *Revue des Etudes Byzantines* 32 (1974), 1–145.

32. M. Rautman, "The Church of the Holy Apostles in Thessaloniki: A Study in Early Palaeologan Architecture" (Ph.D. diss., Indiana University, 1984); also P. I. Kuniholm and C. L. Striker, "Dendrochronology and the Architectural History of the Church of the Holy Apostles in Thessaloniki," *Architectura* 20 (1990), 1–26, for some refinements; the dating of the building remains controversial.

33. See Ousterhout, *Architecture of the Kariye Camii*.

34. For the decoration, see P. A. Underwood, *The Kariye Djami*, 3 vols. (New York, 1966); vol. 4, ed. P. A. Underwood (Princeton, 1975).

35. R. Krautheimer, *Early Christian and Byzantine Architecture*, 4th rev. ed. (Harmondsworth, 1986), 443.

36. R. Ousterhout, "Temporal Structuring in the Chora Parekklesion," *Gesta* 34.1 (1995), 63–76.

SUGGESTIONS FOR FURTHER READING

R. Krautheimer, *Early Christian and Byzantine Architecture*, 4th rev. ed. (Harmondsworth, 1986), is the standard text for a general introduction to Byzantine architecture; it contains further information and bibliography for all the buildings discussed in this chapter.

R. Janin, *La géographie ecclésiastique de l'empire byzantine*, 1, iii. *Les églises et monastères* (Paris, 1969).

W. F. Kleinbauer, *Early Christian and Byzantine Architecture: An Annotated Bibliography* (New York, 1992).

R. J. Mainstone, *Hagia Sophia: Architecture, Structure, and Liturgy of Justinian's Great Church* (New York, 1988).

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T. F. Mathews, *The Early Churches of Constantinople: Architecture and Liturgy* (University Park, Pa., 1971).

———, *The Byzantine Churches of Istanbul: A Photographic Survey* (University Park, Pa., 1976).

W. Müller-Wiener, *Bildlexikon zur Topographie Istanbuls* (Tübingen, 1977).

A. Van Millingen, *Byzantine Churches in Constantinople* (London, 1912).



Color Plate I Constantinople (Istanbul), aerial panorama looking west along the Golden Horn, a deep inlet of the Bosphoros. Dominating the foreground is the great Byzantine church of Hagia Sophia, converted by the Turks into a mosque and now a museum; across the Golden Horn is the Galata quarter, once the home of the Genoese population of Constantinople. Beyond this picture, to the right (east), the Golden Horn meets the Bosphoros, the strait that separates Europe from Asia and connects the Black Sea (to the north) with the Sea of Marmara and ultimately the Mediterranean Sea (to the south); see the map on page viii and the plan of Constantinople in Figure 1.9. (courtesy J. Wayman Williams)



Color Plate II Constantinople (Istanbul), view along the fifth-century land walls. In the Middle Ages, the moat was filled only in times of siege. For much of its length it is now divided into garden plots; the walls themselves have been transformed in a recent restoration. For the original extent of the walls, see Figure 1.9; for a reconstruction, see Figure 1.12. (J. Alchermes)



Color Plate III Stiris (Phokis), Hosios Loukas, apse and dome over the sanctuary of the Katholikon. In the apse the Virgin is enthroned with the Christ Child; in the dome, the seated apostles receive the inspiration of the Holy Spirit in the scene of the Pentecost (see also Figure 5.10). These mosaics date to the eleventh century. (courtesy G. L. Carr)



Color Plate IV.A Stiris (Phokis), Hosios Loukas, narthex of the Katholikon. The Crucifixion of Christ is shown in this eleventh-century mosaic, where the cross is flanked by the Virgin and Saint John. Compare the representation of this scene in different media at different dates: Figures 3.22a, 3.23, 3.24, 5.1, 5.2, 5.23, 6.29, 7.21, and 8.39a. (courtesy G. L. Carr)



Color Plate IV.B Stiris (Phokis), Hosios Loukas, narthex of the Katholikon. The mosaic depicts the Anastasis (Greek for "resurrection"), in which Christ destroys the gates of Hell and releases Adam and Eve, who represent all humans. The event is witnessed by the Old Testament kings David and Solomon. Eleventh century; compare with the same subject in different media and from different dates in Color Plate XIV and Figures 7.16, 8.39b, and 8.40. (H. Maguire)



Color Plate V Daphni, monastery church, dome. Christ looks down from the dome, symbolizing heaven, in this late eleventh–early twelfth-century mosaic. See Figure 4.22 for a view of the mosaic from the floor of the church, and Figure 5.14 for the image before its restoration. (courtesy G. L. Carr)



Color Plate VI Constantinople, Chora monastery, west wall of naos. The early fourteenth-century mosaic depicts the Koimesis (the Dormition, or Sleep) of the Virgin. Christ is about to carry her mummylike soul to heaven. The mosaic is seen in situ in Figure 4.24; Figure 5.24 shows an eleventh–twelfth-century mosaic of the same subject. (R. Ousterhout)