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# THE HOLY APOSTLES

DUMBARTON OAKS BYZANTINE SYMPOSIA AND COLLOQUIA

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THE HOLY APOSTLES  
A Lost Monument, a Forgotten Project,  
and the Presentness of the Past

*Edited by*

MARGARET MULLETT AND ROBERT G. OUSTERHOUT

WITH APPENDIXES PREPARED BY FANI GARGOVA



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Summary: “Founded by Constantine the Great, rebuilt by Justinian, and redecorated in the ninth, tenth, and twelfth centuries, the church of the Holy Apostles in Constantinople was the mausoleum of emperors, patriarchs, and saints. It was also a key station in the ceremonies of the city, the site of an important school, a major inspiration for apostolic literature, and, briefly, the home of the patriarch. Despite its importance, the church no longer exists, replaced by the mosque of Mehmet II after the fall of the city to the Ottomans. Today it is remembered primarily from two important middle Byzantine *ekphraseis*, which celebrate its beauty and importance, as well as from architectural copies and manuscript illustrations. Scholars have long puzzled over its appearance, as well as its importance to the Byzantines. Anxious to reconstruct the building and its place in the empire, an early collaborative project of Dumbarton Oaks brought together a philologist, an art historian, and an architectural historian in the 1940s and 1950s to reconstruct their own version of the Holy Apostles. Never fully realized, their efforts remained unpublished. The essays in this volume reconsider their project from a variety of vantage points, while illuminating differences of approach seventy years later, to arrive at a twenty-first century synthesis”—Provided by publisher.

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The untimely illness and passing of one of our contributors, Slobodan Ćurčić, left a large and glaring lacuna in the history of the Holy Apostles, one which was ably filled by Nikolaos Karydis, who graciously joined the project at a later date. We also mourn the loss of Ruth Macrides, who died as the volume was moving into production. We hope the final product may stand as a fitting memorial to their lives and careers.

Margaret E. Mullett  
Robert G. Ousterhout  
Belfast, May 2019



**FIG. 1.1.** Speakers at the 1948 Symposium. From left to right: Anastos, Downey, Friend, Dvornik, Underwood; seated in front: Der Nersessian. DOA, Byzantine Studies, Symposium 1948, acc. no. AR.PH. Misc.216

# JUSTINIAN'S CHURCH OF THE HOLY APOSTLES

## A New Reconstruction Proposal

NIKOLAOS KARYDIS

**T**HE SIXTH-CENTURY CHURCH OF THE HOLY APOSTLES AT CONSTANTINOPLE may be lost forever, but the interest in its design and history is far from subsiding. Since the rediscovery of two medieval descriptions of the church in the late nineteenth century, several historians of Byzantine architecture have tried to recapture its lost form and study its transformations through time. The strong scholarly interest in this building reflects its historical significance. Occupying a commanding location on the fourth hill of Constantinople, this church was one of the city's major religious landmarks for more than a thousand years. According to most scholars, the history of the monument began with the construction of Constantine's mausoleum in the fourth century. Eusebius's *Life of Constantine* suggests that the imperial tomb inside the mausoleum was surrounded by the repositories of the twelve apostles.<sup>1</sup> But this fusion between the sacred and the profane under the imperial wing was not to last. By the end of the fourth century,<sup>2</sup> the site had changed: it was occupied by a cruciform basilica dedicated to the apostles and a separate mausoleum, which contained the tombs of Constantine and his successors.<sup>3</sup> The middle of the sixth century constitutes a milestone in the development of the complex: between 540 and 550 CE Justinian rebuilt the church and added a new mausoleum to the complex. However, his architects did not alter the overall site plan: funerary monuments and church remained separate. It was largely in this form that the building was to be experienced until the fifteenth century.

Justinian's church exerted a strong influence on the development of ecclesiastical architecture. This was one of the two earliest examples of the cruciform church with plural domes—the church of Saint John in Ephesos being the other contemporary example of this type.<sup>4</sup> These monuments provided the model for later developments. San Marco in Venice and Saint-Front in Périgueux, themselves cruciform domed basilicas, demonstrate the longevity of this type and its influence beyond the borders of Byzantium (fig. 7.1).<sup>5</sup>

1 See P. Grierson, "The Tombs and Obits of the Byzantine Emperors (337–1042)," *DOP* 16 (1962): 3–63, esp. 5.

2 The date of construction of the Mausoleum of Constantine and the first church of the Holy Apostles has been the subject of a long debate that has not yet found a unanimously accepted conclusion. Most authors believe that the first mausoleum was the work of Constantine and that his successor built the first church of the Holy Apostles.

3 For the development of the site in the 4th century see M. Johnson, *The Roman Imperial Mausoleum in Late Antiquity* (New York, 2009), 122.

4 Recent research shows that the early 6th-century phase of St. John's was almost identical to the Apostoleion. See N. Karydis, "The Evolution of the Church of St. John at Ephesos during the Early Byzantine Period," *ÖJb* 84 (2015): 97–128.

5 For the use of the Holy Apostles as a model for the original church of San Marco, see O. Demus, *The Church of San Marco in Venice: History, Architecture, Sculpture* (Washington, DC, 1960), 64. For the 11th-century church of San Marco and its similarities with the church of St. John in Ephesos and Justinian's Apostoleion, see F. Forlati, *La basilica di San Marco attraverso i suoi restauri* (Trieste, 1975), 62, and E. Concina, *Storia dell'architettura di Venezia dal VII al XX secolo* (Milan, 1995), 35–36. For a somewhat



**FIG. 7.1.** Basilica of San Marco, Venice, view of the interior (photo by author, 2010)

Despite its architectural and historical value, the entire complex was pulled down soon after the Ottoman conquest to clear the ground for the Fatih Camii and its surrounding complex (*küllüye*).<sup>6</sup> The first Fatih Camii has not survived, but the little that we know about its form suggests that it was inspired more from the design of Hagia Sophia than that of the Apostoleion.<sup>7</sup> As

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dated but interesting examination of the Byzantine origins of the design of Saint-Front de Périgueux, see F. de Verneilh, *L'architecture byzantine en France: Saint-Front de Périgueux et les églises à coupoles de l'Acquaine* (Paris, 1851), 11–19.

<sup>6</sup> The complex of the Holy Apostles was destroyed before it could be visited and described in detail by Renaissance travelers, such as Pierre Gilles, who visited Constantinople in the 1540s. Gilles mentions the destruction of the Holy Apostles and claims that the church was replaced by the Fatih Camii. See P. Gilles (Gyllius), *The Antiquities of Constantinople*, trans. John Ball (London, 1729), 222–23.

<sup>7</sup> See G. Necipoğlu, “From Byzantine Constantinople to Ottoman Kostantiniyye: Creation of a Cosmopolitan Capital

and Visual Culture under Sultan Mehmed II,” in *From Byzantium to Istanbul: 8000 Years of a Capital*, ed. C. Anadol (Istanbul, 2010): 262–77, esp. 266.

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and Visual Culture under Sultan Mehmed II,” in *From Byzantium to Istanbul: 8000 Years of a Capital*, ed. C. Anadol (Istanbul, 2010): 262–77, esp. 266.



**FIG. 7.2.**  
Church of St. John  
in Ephesus, view of  
the remains from  
the east, looking  
northwest (photo  
by author, 2007)

to visualize the monument, the present reconstruction is largely hypothetical. In the absence of substantial remains of this church, we cannot recapture its form with certainty. Our objective is, rather, to construct a plausible model for the lost church, which will be based on the best possible interpretation of the limited evidence, predominantly textual, at our disposal. But before we move on to analyze previous and current approaches to reconstruction, a few words are necessary to describe in more detail the nature of the evidence on which this paper is based.

### Sources of Knowledge: Literary Evidence and Affiliated Monuments

Textual records provide important information about the form of the sixth-century church. The earliest description of the building is included in Procopius's panegyric *On Buildings*.<sup>8</sup> Writing

<sup>8</sup> For an English translation of the original Greek text, see H. B. Dewing, trans., *Procopius*, vol. 7, *On Buildings* (London and Cambridge, MA, 1940). Procopius's work has been analyzed

shortly after the remodeling of the Holy Apostles by Justinian, Procopius gave an outline of its plan and vaults, and briefly discussed its previous, fourth-century phase.<sup>9</sup> However, the study of this brief and "sketchy" account is not sufficient to envision the building in all its complexity. For this, one needs to turn to two longer and

from a literary, political, and cultural viewpoint by Av. Cameron, *Procopius and the 6th Century* (Berkeley and Los Angeles, CA, 1985), 84–112, and G. Downey, "The Composition of Procopius, *De Aedificiis*," *TAPA* 78 (1947): 171–83.

<sup>9</sup> The date of Procopius's treatise is controversial. Both M. Whitby ("Justinian's Bridge over the Sangarius and the Date of Procopius' *de Aedificiis*," *JHS* 105 [1985]: 129–48, esp. 141–47) and Downey ("Composition of *De Aedificiis*," 181), place this book at ca. 560. Their attribution is based on Procopius's reference to the imminent completion of the bridge over the Sangarius River, which, according to other sources, was begun only in ca. 560. On the other hand, according to Cameron (*Procopius*, 9, 85–86), an earlier date, ca. 554/555, "accords far better, on all grounds, with Procopius' work." According to F. Montinaro ("Power, Taste, and the Outsider: Procopius and the Buildings Revisited," in *Shifting Genres in Late Antiquity*, ed. G. Greatrex and H. Elton [Farnham, 2015], 191–206; "Études sur l'évergétisme impérial à Byzance" [PhD diss., École Pratique des Hautes Études-Sorbonne, 2013]), Procopius's work had two redactions, the first in 550 and the second in 554.

more detailed descriptions written in the middle Byzantine period.

The first of these descriptions is found in the verse *ekphrasis* of the Holy Apostles, which Constantine the Rhodian dedicated to the emperor Constantine VII Porphyrogennetos.<sup>10</sup> Although this was composed approximately four centuries after Justinian's remodeling,<sup>11</sup> the author of the *Ekphrasis* states that he is describing the sixth-century monument. Indeed, his description agrees with Procopius's account. But the approach of Constantine the Rhodian is different: unlike Procopius, he adopts the point of view of the designer and demonstrates an impressive architectural sensibility, providing information rarely found in Byzantine written records.<sup>12</sup> For instance, he describes the number and disposition of columns and piers, and makes detailed references to vaults and their geometry.

Further evidence can be drawn from the lengthy prose description written by Nicholas Mesarites between 1198 and 1203.<sup>13</sup> Remarkably detailed, this document is entirely devoted to the complex of the Holy Apostles. Unlike previous accounts, which view the church as an isolated object, this one examines it in its larger setting, taking into account the mausoleums of

Constantine and Justinian. Mesarites' reference to the church itself is also valuable. Although he focuses on mosaic decoration, the author also observes the disposition of columns, the vaults, and even details such as the religious furnishings and paving patterns. If the overall layout Mesarites described is probably that of Justinian's church, the vaults he described are likely to be the result of a subsequent restoration.<sup>14</sup>

Both Constantine the Rhodian and Mesarites pay particular attention to the architecture of the Holy Apostles, and, at first sight, their descriptions appear to be an excellent basis for recapturing aspects of the monument. However, we should note that these accounts also include many poetic elements and are influenced by literary conventions. Their use as basis for a hypothetical reconstruction requires one to distinguish factual information from poetic license. But it is difficult to achieve this: many sections of these descriptions are enigmatic, and they overlook certain aspects of the building, such as the elevations, atrium, narthex, and mausoleums. To fill these lacunae, scholars often turn to other, briefer references in a variety of textual sources, such as visitor accounts, or the *Book of the Ceremonies* of Constantine VII Porphyrogennetos. However, information drawn from these documents is often ambiguous and open to various interpretations. Using the alleged representations of the church of the Holy Apostles in Byzantine illuminated manuscripts has also proven to be problematic due to the lack of precision and "generic" nature of these images, not to mention the difficulty of identifying the church they represent with certainty.<sup>15</sup>

10 Preserved in the Manuscript Athos Lavra 1161 (L. 170, fols. 139r–147r), the *Ekphrasis* of Constantine the Rhodian was first edited by E. Legrand, "Description des oeuvres d'art et de l'église des Saints-Apôtres de Constantinople: Poème en vers iambiques par Constantin le Rhodien," *REG* 9 (1896): 32–65. A complete English translation was recently published by L. James, ed., *Constantine of Rhodes, On Constantinople and the Church of the Holy Apostles, with a New Edition of the Greek Text by Ioannis Vassis* (Farnham, Surrey, and Burlington, VT, 2012), 15–94.

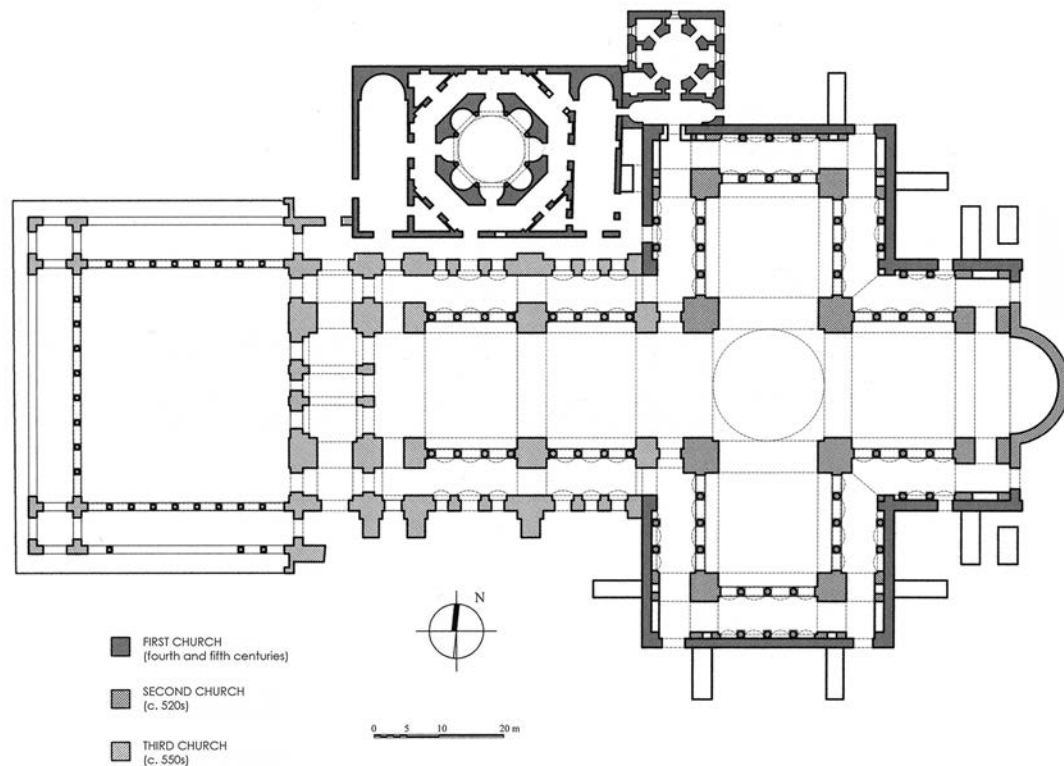
11 James (*Constantine of Rhodes*, 10), discusses the various theories regarding the date of the poem.

12 Constantine the Rhodian (line 538) modestly confesses that he is "a stranger to the deeds of architects." However, his record indicates a rare ability to observe and understand complex forms. See James, *Constantine of Rhodes*, 54–55.

13 The manuscript of this description was discovered in the Ambrosian Library in Milan (Cod. Ambrosianus gr. 350, F 93 sup. and gr. 352, F 96 sup.) in 1898, by August Heisenberg. It was first published in A. Heisenberg, *Grabeskirche und Apostelkirche: Zwei Basiliken Konstantins*, vol. 2, *Die Apostelkirche in Konstantinopel* (Leipzig, 1908), 10–96. For English translation and commentary, see G. Downey, "Nikolaos Mesarites: Description of the Church of the Holy Apostles at Constantinople," *TAPS*, n.s., 47, part 6 (1957): 855–924; M. Angold, *Nicholas Mesarites, His Life and Works (in Translation)*, TTB 4 (Liverpool, 2017), 83–133.

14 Richard Krautheimer raised the possibility that the vaults were modified between ca. 940 and 989, and were therefore different from the Justinianic ones (described by Constantine the Rhodian and Procopius). See R. Krautheimer, "A Note on Justinian's Church of the Holy Apostles in Constantinople," in Krautheimer, *Studies in Early Christian, Medieval, and Renaissance Art* (London, 1971), 270. A. Wharton Epstein, "The Rebuilding and Redecoration of the Holy Apostles in Constantinople: A Reconsideration," *GRBS* 23 (1982): 79–92, esp. 85, has raised justified doubts about the validity of Krautheimer's use of evidence from depictions of the church in illuminated manuscripts to support his theory.

15 According to Krautheimer ("Note on Justinian's Church," 198), four illustrations in illuminated manuscripts are likely to represent the church of the Holy Apostles. Three of these illustrations are included in the *Menologion of Basil II* (Vat.



**FIG. 7.3.**  
Church of St. John in  
Ephesos, plan of the  
remains (drawing by  
C. Vasilikou, 2009)

Evidence from the written word alone is insufficient to visualize the church. One needs to interpret the descriptions by reference to comparable buildings elsewhere. The closest parallel for Justinian's Apostoleion is the church of St. John at Ephesos. Both monuments were remodeled during the lifetime of Procopius, who claims that they resembled each other very closely.<sup>16</sup> The fact that a similar statement is made in the Patria of Constantinople gives certain credence to Procopius's claim. However, this

Gr. 1613, fol. 341r, 353r, 121r) and allegedly represent the 10th-century Apostoleion. A 4th possible representation of the church occurs in the two 12th-century manuscripts of the homilies of James Kokkinobaphos (Vat. Gr. 1162, fol. 2). For further information regarding these representations and the problems of using them as basis for reconstruction, see James, *Constantine of Rhodes*, 190–92.

<sup>16</sup> See Procopius, *De aed.*, 5.1.6, ed. and trans. Dewing, *On Buildings*, 316–19. One of the terms that Procopius uses to describe the similarity between St. John at Ephesos and the Holy Apostles at Constantinople is “ἐμφερέστατος,” which, according to H. B. Dewing, indicates “close resemblance in all respects.” This translation seems to be consistent with another instance of the use of the same term by Procopius in his *History of the Wars*, 1.23.2.4. In 2009, I had the opportunity to discuss the relevant passages with Dame Averil Cameron, who confirmed that Procopius's statement in *De aed.* (5.1.6) indicates a strong architectural resemblance between the two buildings.

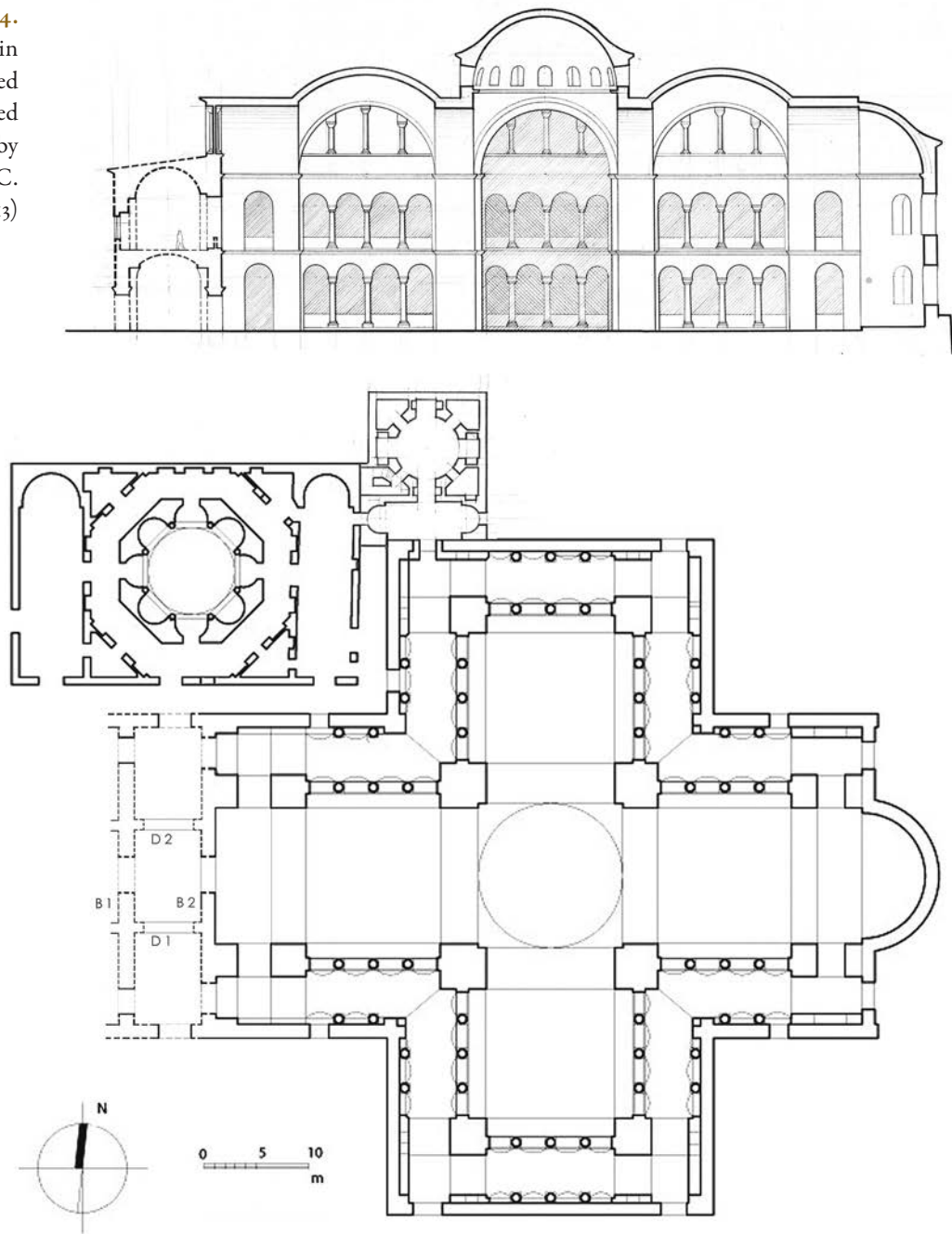
claim needs to be used with caution.<sup>17</sup> One could argue that Procopius's perception of the resemblance between buildings may be different from the present scholarly understanding of architectural similarities. Indeed, Richard Krautheimer has highlighted differences between buildings that medieval authors considered to be similar.<sup>18</sup> Nevertheless, Procopius's claim is confirmed to a certain extent by recent research in the phases of the church of St. John at Ephesos. Until recently, scholars were confused by the differences between the excavated footprint of the Ephesian monument (fig. 7.3), which had six bays, and the descriptions of the church of the Holy Apostles, which mention only five. But these differences

<sup>17</sup> See T. Preger, *Scriptores Originum Constantinopolitanarum*, vol. 2 (Leipzig, 1907), 287.

<sup>18</sup> See R. Krautheimer, “Introduction to an ‘Iconography of Medieval Architecture,’” *JWarb* 5 (1942): 1–33, esp. 2–5. Even buildings that belong to the same architectural type can have many differences. In our case, the surviving medieval churches that seem to emulate the cruciform plan and plural domes of Justinian's Apostoleion deviate from each other in substantial ways. See T. Papacostas, “The Medieval Progeny of the Holy Apostles: Trails of Architectural Imitation across the Mediterranean,” in *The Byzantine World*, ed. P. Stephenson (London, 2010), 386–405; James, *Constantine of Rhodes*, 192–93.



**FIG. 7.4.**  
Church of St. John in  
Ephesos, reconstructed  
plan of the first vaulted  
church (drawing by  
author and C.  
Vasilikou, 2013)



are misleading. My recent reexamination of the architectural history of St. John in Ephesos revealed a previously unknown phase of construction. Survey of the archaeological remains showed that the six-bay church resulted from the modification of an earlier, centralized, five-bay church, which was also domed (fig. 7.4).<sup>19</sup>

<sup>19</sup> See Karydis, “Church of St. John at Ephesos,” 97–128. According to this paper, the transept and east cross arm of the

This discovery seems to confirm, at least to a certain extent, Procopius’s statement regarding the architectural similarity between St. John’s and the Apostoleion. Of course, this does not mean that the two buildings were identical.

“current” church of St. John belong to an earlier phase than the nave. This new reading of the phases is different from that published in E. Russo, *Sulla cronologia del S. Giovanni e di altri monumenti paleocristiani di Efeso* (Vienna, 2010), 9–55.

What Procopius's statement suggests is simply that St. John's can be considered a "comparable example," and that the study of this monument can play an important role in the reconstruction of the Holy Apostles. This role has not yet been fully evaluated, and the present article aims to fill this lacuna.

The renewed understanding of the church of St. John at Ephesos, enables us to examine the evidence for Justinian's church of the Holy Apostles in a new light. Detailed observation of the Ephesian church helps to reinterpret the historical descriptions, resolving problems that had puzzled scholars for decades. The study of previous reconstructions is no less important. My understanding of the evidence is indebted to the work of scholars who discovered, translated, and interpreted the written records. Without these efforts, no deduction regarding the form of our monument would be possible. A short account of the literature on which this paper is based can be found in what follows.

### Literature Review

The history of the reconstruction of the Holy Apostles begins in 1863, with the work of Heinrich Hübsch, a nineteenth-century architect, whose article "In what style shall we build?" (1828) influenced the transition from neoclassicism to historicism.<sup>20</sup> As a practicing architect who sought to revive aspects of the Romanesque and the Byzantine tradition, Hübsch seems to have been more interested in the church of the Holy Apostles as a precedent for new design than as a missing link in the development of Byzantine architecture. Indeed, his reconstruction drawings provide a palpable image of the lost church, but, alas, lack rigorous substantiation. The only source of evidence available to Hübsch seems to have been the account of Procopius, and many features of his reconstruction (such as the eastern apse or the transept porches) do not agree with the records discovered later in the nineteenth

century. The German architect tried to make up for the shortage of evidence by "borrowing" stylistic elements from the Byzantine monuments of Rome, Ravenna, Venice, and Constantinople. The resulting drawings were stimulating and inventive, but lacked the authenticity required to understand the Constantinopolitan church in depth (fig. 7.5).

The discovery of the accounts of Constantine the Rhodian and Nicholas Mesarites gave a new momentum to the study of the church. However, the potential of these sources was not evaluated immediately. Take Theodore Reinach's work (1896), for instance.<sup>21</sup> Although Reinach was the first to use the account of Constantine the Rhodian, his reconstruction proposal lacks detail and its form can claim only a vague kinship to early Byzantine architecture. Based on a careful linguistic analysis of the same account, Oskar Wulff's reconstruction (1898) is more convincing.<sup>22</sup> Wulff's model has a cruciform plan with five main bays and cross arms of equal length. The central bays are covered by hemispherical domes. The vaults are carried by piers, which alternate with double-storied arcades. The latter consist of four columns each and carry clerestory walls.

Wulff's proposal was to have a major influence on August Heisenberg's reconstruction, published in 1908.<sup>23</sup> Having discovered and analyzed the account of Mesarites, Heisenberg reproduced all the features of Wulff's model, adding to it the *thysiasterion* (sanctuary) and the mausoleums mentioned by the twelfth-century author (fig. 7.6). Still, he disagreed with Wulff about the gallery arcades, which, in his reconstruction, do not carry clerestory walls and appear to be strangely redundant. Heisenberg shows all these elements in a diagrammatic way. A more detailed investigation of this same model was published by the architect Cornelius Gurlitt (1907 and 1912).<sup>24</sup> Reviving the inventive

21 See T. Reinach, "Commentaire archéologique sur le poème de Constantin le Rhodien," *REG* 9 (1896): 66–103, esp. 93–103.

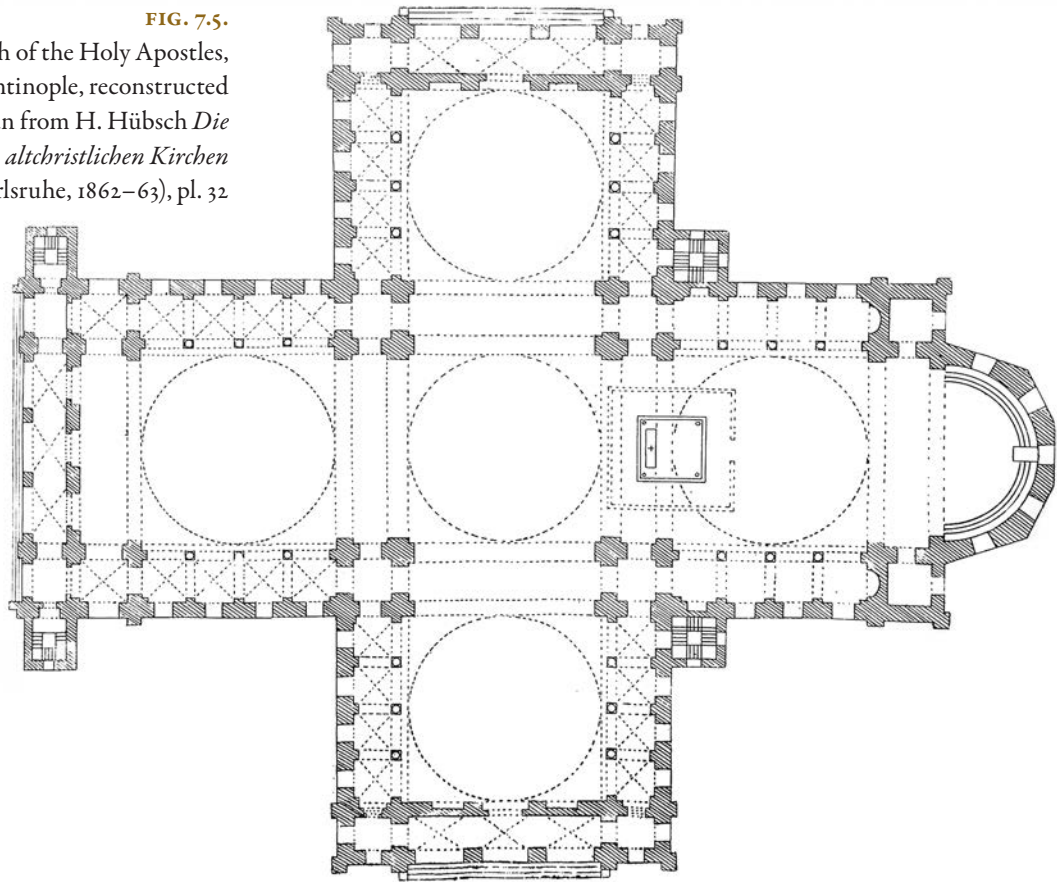
22 See O. Wulff, "Die sieben Wunder von Byzanz und die Apostelkirche nach Konstantinos Rhodios," *BZ* 7 (1898): 316–31.

23 See Heisenberg, *Apostelkirche*.

24 See C. Gurlitt, *Die Baukunst Konstantinopels* (Berlin, 1907), 29, for a description of Justinian's Apostoleion, and

20 See H. Hübsch, *Die altchristlichen Kirchen* (Karlsruhe, 1862–63), pl. 32. For an analysis of Hübsch's architectural theories, see B. Bergdoll, "Archaeology vs. History: Heinrich Hübsch's Critique of Neoclassicism and the Beginnings of Historicism in German Architectural Theory," *Oxford Art Journal* 5, no. 2 (1983): 3–12.

**FIG. 7.5.**  
Church of the Holy Apostles,  
Constantinople, reconstructed  
plan from H. Hübsch *Die  
altchristlichen Kirchen*  
(Karlsruhe, 1862–63), pl. 32



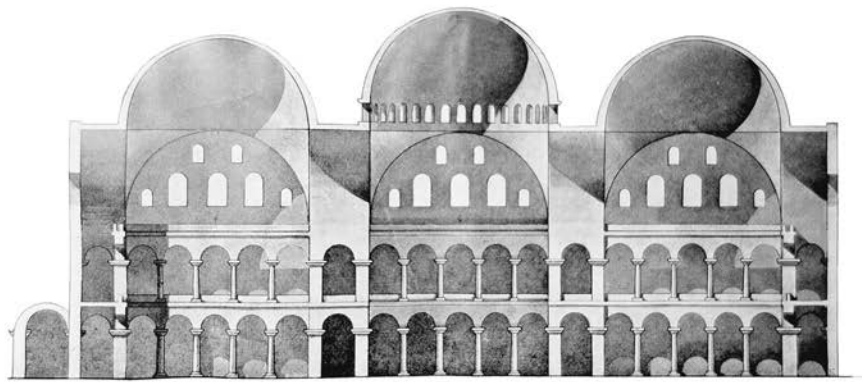
approach to reconstruction championed by Hübsch, Gurlitt was the first to investigate the transformations of the church, from its foundation to Justinian's remodeling. His model of the sixth-century church maintains the lines and structures of Heisenberg's reconstruction, and provides a convincing visualization of the central sanctuary. However, his quatrefoil plan of the Mausoleum of Justinian lacks proof, and his fanciful theory regarding the development of Constantine's mausoleum does not agree with the account of Mesarites, nor indeed with early Byzantine construction principles.

Gurlitt and Heisenberg based their work almost exclusively on textual sources. Two decades later, the discovery and excavation of the remains of St. John at Ephesos by George Soteriou helped to review the descriptions of the Holy Apostles in a new light, providing Soteriou with a new basis

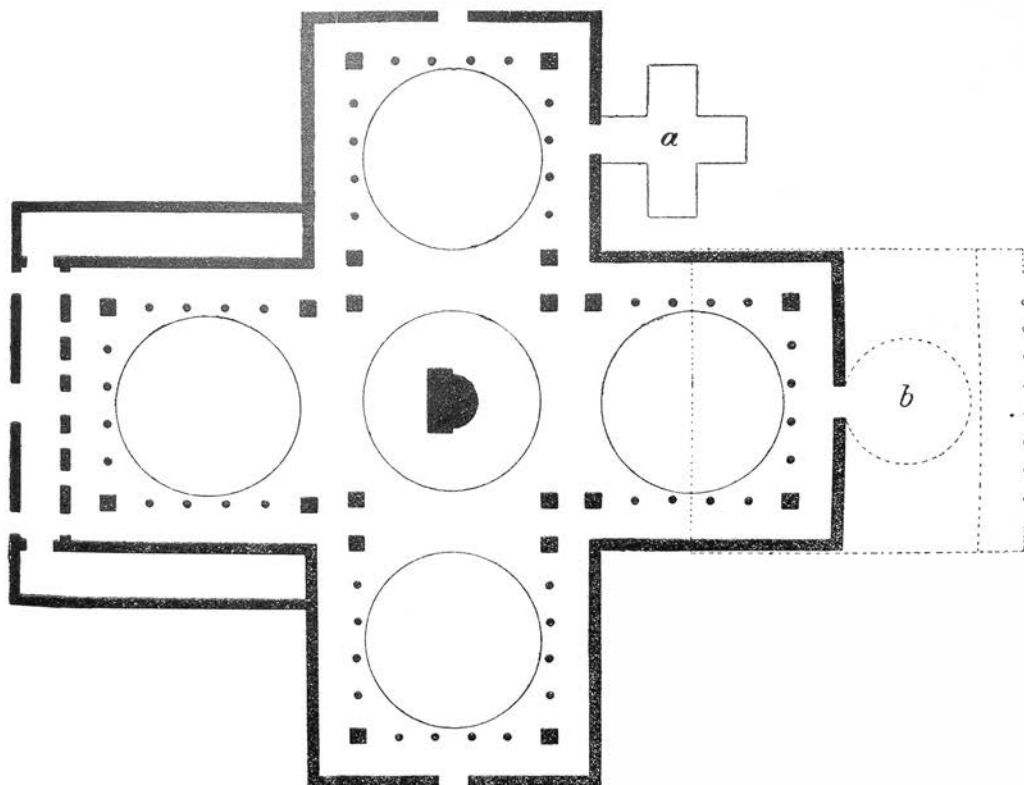
for reconstruction.<sup>25</sup> Published in 1924, his model constitutes a logical compromise between the author's plan of St. John and the historical descriptions of the Apostoleion (fig. 7.7). For instance, the solid, compact piers of the church of St. John are replaced by the composite "fourfold" piers described by Constantine the Rhodian. Also, the number of columns in each screen is reduced to tally with the number given by Mesarites. But the resulting reconstruction does not agree with all the descriptions. For instance, it overlooks Procopius's claim that the west cross arm was longer than the east one. Also, the disconnection between the piers and the aisles seems to be at odds with the relationship between these elements in coeval buildings such as Hagia Sophia and Hagia Eirene at Constantinople. Soteriou's model is quite atypical in this respect.

pl. XL for a tentative graphic reconstruction showing all the phases of the building and the mausolea.

25 See G. A. Soteriou, "Ανασκαφαί του Βυζαντινού Ναού Ιωάννου του Θεολόγου εν Εφέσω," *Αρχ. Δελτ.* 7 (1921–22): 89–226, esp. 205–17.



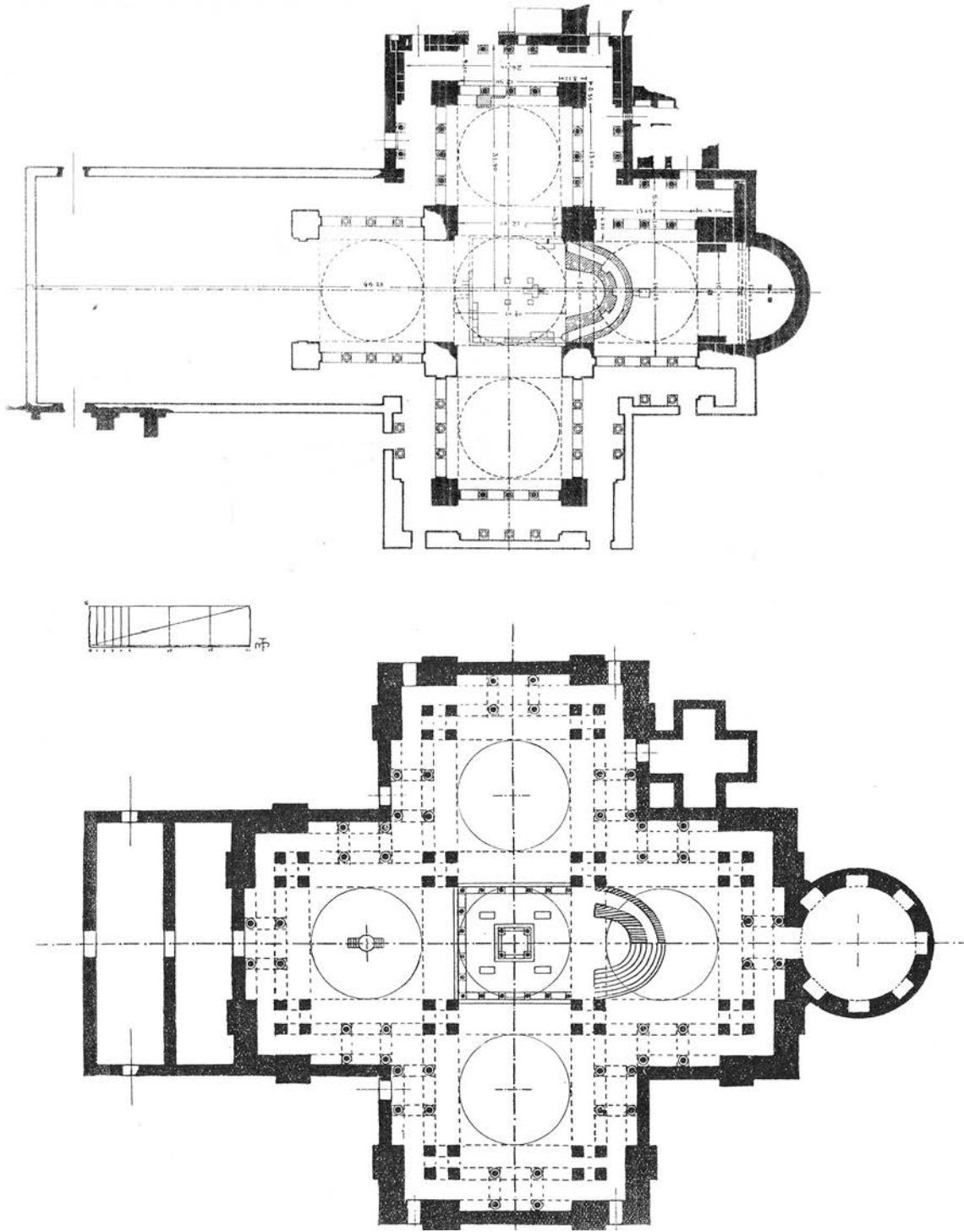
**FIG. 7.6.** Church of the Holy Apostles, reconstructed plan, from A. Heisenberg, *Grabeskirche und Apostelkirche: Zwei Basiliken Konstantins*, vol. 2, *Die Apostelkirche von Konstantinopel* (Leipzig, 1908), fig. 1, pl. 5



To understand the limitations of Soteriou's reconstruction, one needs to take into account that his excavation of St. John at Ephesos was interrupted under duress in 1922. By this time, the Greek archaeologist had only exposed the transept and east cross arm of the church. It was these parts that he used as a basis for the study of the Holy Apostles. However, when the excavations were resumed by the Austrian Archaeological Institute, St. John's proved to be very different

from what Soteriou had expected.<sup>26</sup> The elongated west cross arm of the church included not one but two bays, bringing the total number of bays to six (fig. 7.3). This discovery raised doubts about the alleged similarity between the Holy Apostles with its centralized plan and five bays, and St. John's with its elongated nave and six

<sup>26</sup> See H. Hörmann, J. Keil, and G. A. Soteriou, *Die Johanneskirche, Forschungen in Ephesos 4.3* (Vienna, 1951).



**FIG. 7.7.** Plans of two monuments investigated by George A. Soteriou in the 1920s. *Above:* survey plan of the church of St. John in Ephesos, carried out during the excavation of 1921–22. *Below:* Reconstructed plan of the church of the Holy Apostles. From G. A. Soteriou, “Ανασκαφαί του Βυζαντινού Ναού Ιωάννου του Θεολόγου εν Εφέσω,” *Αρχ. Δελτ.* 7 (1921–22): 89–226, figs. 7 and 75.

bays. As a result, the latter's value as a basis for reconstructing the Constantinopolitan monument was challenged.

Karl Wulzinger (1932) was the last scholar to use St. John's plan as a model for the reconstruction of the Apostoleion.<sup>27</sup> Trying to follow the definitive, elongated form of the Ephesian church, he ended up contradicting the textual records in his reconstruction. Still, this publication remains interesting because of the author's attempt to establish the dimensions and scale of the monument by reference to the plan of the Fatih Camii. Wulzinger believed that the current mosque was superimposed on the remains of the Holy Apostles, with its dome centered on the crossing of the church. This hypothesis was compromised by an insufficient understanding of the phases of the mosque. However, this approach seems to have influenced later efforts to understand the size of Justinian's Apostoleion and localize its actual site.

The same interest in the scale of the church and its relationship to the mosque also characterize the graphic reconstruction presented by Paul Underwood, Glanville Downey, and Albert Mathias Friend, Jr., in 1948.<sup>28</sup> The methodology of this reconstruction was based on the graphic investigation of the textual evidence, with an emphasis on the description of Constantine the Rhodian. Underwood, the architect of the team, carried out a series of interpretive drawings that sought to "recreate . . . the imagery of the poet."<sup>29</sup> Synthesizing these drawings, the team represented the entire complex in plan and the church in cut-away perspective (fig. 7.8). Presented as a direct reflection of the written records, this reconstruction of Justinian's church closely resembled Heisenberg's model. But the new drawings were not only more detailed but also accompanied by a scale rule, which makes this the second attempt to indicate the size of the building. In this instance, the latter was hypothetically established by reference to

Procopius's observation regarding the size of the church of St. Irene. The three authors took into account the sizes of the churches of San Marco and St. John at Ephesos. They also explored the relationship between the Holy Apostles and the Fatih Camii.<sup>30</sup> However, they did not provide conclusive evidence for their hypothesis. The same lack of proof is found in the team's representation of the church of All Saints and the imperial mausoleums. Still, Underwood's plans of the mausoleums seem to be more plausible from a stylistic point of view than those included in Gurlitt's reconstruction.

After the 1950s, interest in reconstruction faded. The publication of the excavations at St. John in Ephesos in 1951 may have played a role in this development. Revealing stark differences between the Ephesian church and the descriptions of the Apostoleion, this deprived scholars from an important architectural parallel, reducing the already slim body of evidence for reconstruction.<sup>31</sup> In the second half of the twentieth century, research in the Holy Apostles tended to focus on the initial stage of the church's history, from its foundation to its reconstruction by Justinian. The date of the first church and its relationship with the Mausoleum of Constantine proved to be controversial. The debate regarding these pre-Justinianic phases is of interest for our study, as it sheds light on Constantine's mausoleum, which was later integrated in Justinian's complex (together with two other, smaller mausoleums).

Research in Constantine's mausoleum has focused on descriptions provided by fourth and fifth-century authors, including Eusebius and Gregory of Nazianzos. In 1951, Downey raised doubts about the authenticity and date of Eusebius's *Life of Constantine*, and attributed both the first church of the Holy Apostles and Constantine's mausoleum to Constantius.<sup>32</sup> This theory was challenged by Philip Grierson, who

27 See K. Wulzinger, "Die Apostelkirche und die Mehmedije zu Konstantinopel," *Byzantion* 7 (1932): 7–39, esp. 25f.

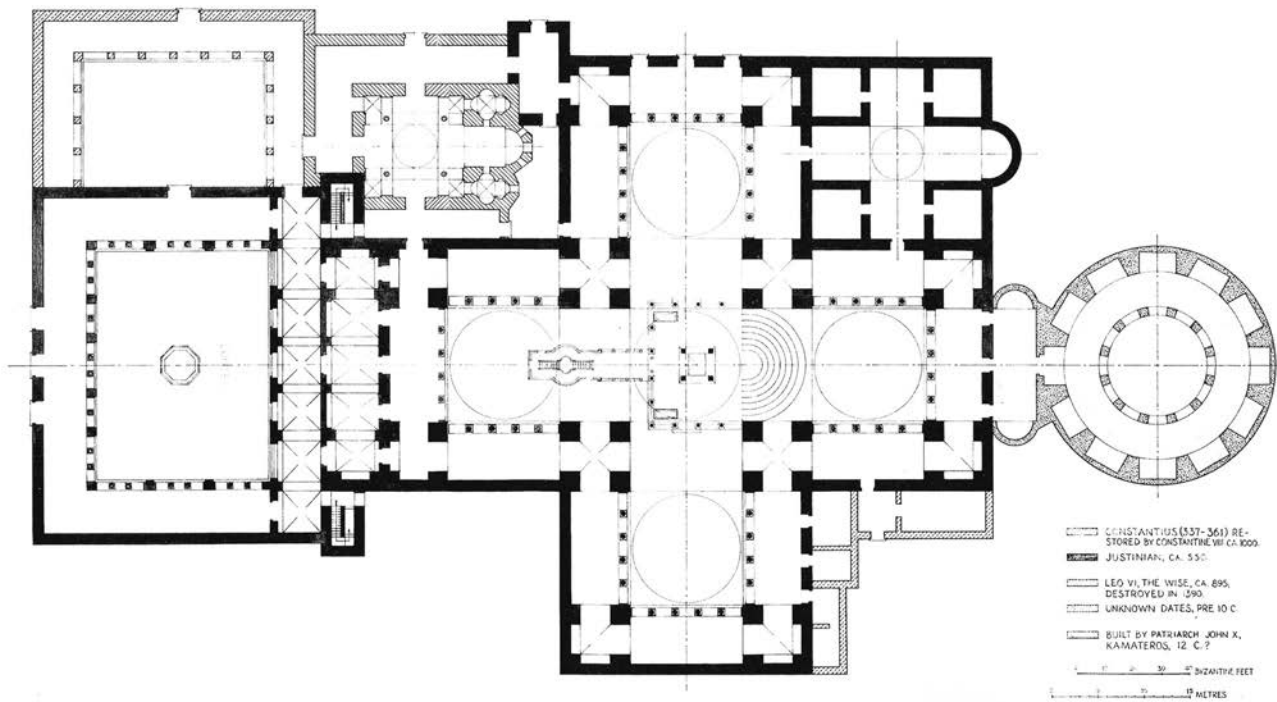
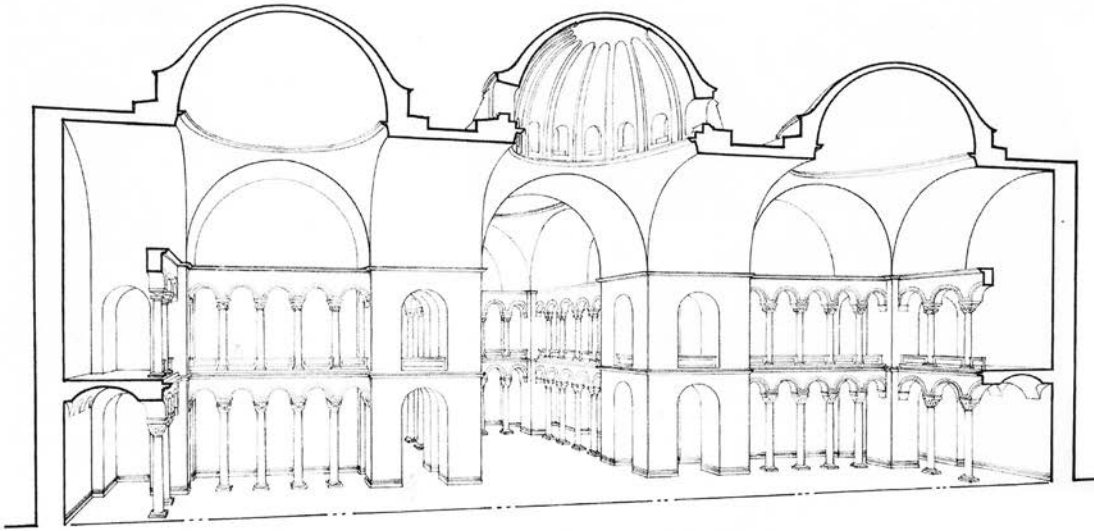
28 This was presented in the Dumbarton Oaks Symposium dedicated to the Holy Apostles in 1948. See B. Daskas and F. Gargova, *The Holy Apostles: Visualizing a Lost Monument; The Underwood Drawings* (Washington, DC, 2015), 7–8.

29 See Daskas and Gargova, *Underwood Drawings*, 11.

30 See below, Appendix E; cf. Daskas and Gargova, *The Underwood Drawings*, 26.

31 James (*Constantine of Rhodes*, 192–93) believes that the use of St. John at Ephesos in the reconstruction of the Holy Apostles is misleading. On the other hand, C. Mango, "Constantine's Mausoleum and the Translation of Relics," *BZ* 83 (1990): 51–62, claimed that "the form of the Holy Apostles can be visualised on the analogy of St. John at Ephesos."

32 See G. Downey, "The Builder of the Original Church of the Apostles at Constantinople: A Contribution to the



**FIG. 7.8.** Complex of the Holy Apostles, reconstructed plan by Paul A. Underwood, in collaboration with Albert Mathias Friend, Jr., and Glanville Downey, from B. Daskas and F. Gargova, *The Holy Apostles: Visualizing a Lost Monument; The Underwood Drawings* (Washington, DC, 2015), figs. 8 and 10

maintained that the first mausoleum was built by Constantine on a circular plan.<sup>33</sup> On the other hand, Krautheimer suggested that Constantine's church had a cruciform plan and was intended as the emperor's burial place, until the tomb was moved to the nearby circular mausoleum built by Constantius.<sup>34</sup> However, Mango objected to this reading of the phases and returned to Grierson's theory, suggesting that Constantine built a circular church-mausoleum, and Constantius added the cruciform basilica next to it.<sup>35</sup> This seems to be the most plausible interpretation of the written records. Indeed, this theory was recently adopted by the studies of Gilbert Dagron (2003), Neslihan Asutay-Effenberger (2006), and Mark Johnson (2009), whose work inscribed Constantine's mausoleum in the architectural typology of the late Roman imperial mausoleum.<sup>36</sup>

The debate regarding the mausoleums seems to have overshadowed the discussion about the form of Justinian's church. The latter was recently resumed with the publications of Ken Dark and Ferudun Özgümüş.<sup>37</sup> Their archaeological survey of the Fatih Camii revealed a series of Byzantine fragments incorporated in the substructures of the mosque and its courtyards. Following a careful examination of the written records and a topographical analysis, the two authors attributed these fragments to the church

of the Holy Apostles. According to this theory, elements of the fifteenth-century mosque, such as the lateral staircases and the walls of its cemetery, were built on the foundations of Justinian's Apostoleion. Observing the pattern of these elements, the authors carried out a diagrammatic plan, which shows the outline of the church. Still, they did not examine the degree to which previous reconstructions are consistent with their hypothesis. As a result, the architectural implications of this discovery have not been fully assessed yet.

### A New Interpretation

The examination of recent publications shows that the problem of the reconstruction of Justinian's Apostoleion remains unresolved. For all the rigor, aesthetics, and historical value of previous reconstructions, scholars have not yet managed to provide a plausible hypothesis for the overall plan, the disposition of load-bearing elements, and the vaulting pattern. Take the plan of the church, for instance. The identical central bays of previous reconstructions contradict the description of Procopius, who states that the western bay was longer than the others.<sup>38</sup> For Hübsch, Heisenberg, and Wulff, this elongation was obtained by adding a narthex to the west arm of the church.<sup>39</sup> However, as the following section suggests, this would have been more of an "addition" than an "extension," and the elongation obtained would hardly be perceived from the interior of the church. For these reasons, which are explained in more detail in the following section, this interpretation is not entirely convincing. The column layout proposed in previous reconstructions also appears to be problematic: the "double columns" mentioned by Constantine the Rhodian are missing from all reconstructions, and the total number of ninety-six columns that is often shown is very far from Mesarites' count of seventy columns. Moreover, the potential relationship of the church with the fifteenth-century plan of the Fatih Camii has not been fully investigated. The

Criticism of the 'Vita Constantini' Attributed to Eusebius," *DOP* 6 (1951): 53–80.

33 See Grierson, "Tombs and Obits," 5.

34 See R. Krautheimer, "On Constantine's Church of the Apostles in Constantinople," in *Studies in Early Christian Medieval and Renaissance Art* (London, 1971), 27–33. Christina Angelidi (1983) and Rudolf Leeb (1992) adopted Krautheimer's theory. See R. Leeb, *Die Verchristlichung der imperialen Repräsentation unter Konstantin dem Großen als Spiegel seiner Kirchenpolitik und seines Selbstverständnisses als christlicher Kaiser* (Berlin, 1992), and C. Angelidi, "Η περιγραφή τῶν Ἁγίων Ἀποστόλων ἀπὸ τὸν Κωνσταντῖνο Ρόδιο. Ἀρχιτεκτονική καὶ συμβολισμὸς," *Βυζαντινά Σύμμεικτα* 5 (1983): 91–125, esp. 113. Angelidi's article includes a reconstructed plan of the Holy Apostles, which closely follows Wulff's late 19th-century model.

35 See Mango, "Constantine's Mausoleum," 51–62.

36 See Johnson, *Roman Imperial Mausoleum*, 125–27. N. Asutay-Effenberger and A. Effenberger, *Die Porphyrsarkophag der oströmischen Kaiser: Versuch einer Bestandserfassung, Zeitbestimmung, und Zuordnung*, Spätantike-frühes Christentum-Byzanz 15 (Wiesbaden, 2006), 129–33, and G. Dagron, *Emperor and Priest: The Imperial Office in Byzantium* (Cambridge, 2003), 135–45.

37 See K. Dark and F. Özgümüş, *Constantinople: Archaeology of a Byzantine Megapolis* (Oxford, 2013), 83–110.

38 See Procopius, *De aed.*, 1.4.13, ed. and trans. Dewing, *On Buildings*, 48–51.

39 See Wulff, "Sieben Wunder," 322; Hübsch, *Altchristlichen Kirchen*, pl. 32; Heisenberg, *Apostelkirche*, 9, 113.



form of the main vaults also remains uncertain: with the exception of Gurlitt, scholars have failed to consider any alternative to the hemispherical dome on pendentives. Finally, previous reconstruction proposals do not discriminate clearly between those hypotheses that are entirely conjectural and those that are reasonably based on the interpretation of written records and similar buildings. As these issues have not yet been fully addressed, our understanding of this major church remains incomplete.

However, significant progress has been carried out since the last reconstruction was presented at Dumbarton Oaks seven decades ago, and it is time to revisit the form of Justinian's church. The starting point of this new reconstruction is the investigation of textual sources. Constantine the Rhodian and Mesarites seem to have an unusual architectural sensitivity and an understanding of construction detail, which distinguishes them from their contemporaries. Their descriptions provide information about the geometry of the Apostoleion, its structure, type of vaults, as well as the number and disposition of its columns and piers. On the other hand, our current approach to the textual sources tends to be more cautious.<sup>40</sup> We are aware that in middle Byzantine descriptions, symbolic and literary considerations often take precedence over the exactness of the recording. In spite of the informative character of our textual sources, it is still necessary to discriminate between their poetic and factual passages. Yet even factual passages are not always exact descriptions but are meant to evoke the overall spirit of the design. In these cases, interpretation can be tricky. Looking at affiliated monuments, such as St. John at Ephesos and San Marco in Venice, can help to penetrate the hidden meaning of these passages. The choice

40 Analyzing the church descriptions included in the 10th-century *Vita Basilii*, R. Ousterhout, "Reconstructing 9th-Century Constantinople," in *Byzantium in the Ninth Century: Dead or Alive?*, ed. L. Brubaker (Hampshire, 1998), 115–30, showed that this record tends to focus on specific details as representative of the whole. Owing to these characteristics, the use of such texts as an aid to reconstruction may prove to be misleading. James, *Constantine of Rhodes*, 190, reached a similar conclusion. Her investigation of the *Ekphrasis* of Constantine the Rhodian highlights the subjective character of this text, as well as its omissions. For James, these characteristics reduce the value of Byzantine descriptions as accurate records.

of the Ephesian church is based on Procopius's statement regarding its strong similarity with the Holy Apostles, as well as recent research in the phases of the Ephesian monument.<sup>41</sup> The choice of San Marco is based on an early twelfth-century source that identifies the Holy Apostles as the model for the Venetian church.<sup>42</sup> Still, it is difficult to identify the specific phase of the basilica of San Marco that used the church of the Holy Apostles as a model, not to mention that it is unlikely that the Venetian monument faithfully reproduced the form of its supposed prototype.<sup>43</sup> Even if there were similarities between the two monuments, these were probably reduced by the transformations of the basilica of San Marco from the ninth to the eleventh century. On the other hand, despite these transformations, John Warren and Rowland Mainstone have suggested that the surviving fabric of the basilica of San Marco incorporates elements of the ninth-century church, and its design is still constrained by it.<sup>44</sup> Furthermore, we cannot overlook the existence of certain analogies between the layout of the present basilica and that of the Holy Apostles as described by Procopius, Constantine the Rhodian, and Mesarites. These analogies include the cruciform configuration of the plan and the use of spherical vaults to cover the main bays. All this suggests that even though the basilica of San Marco is likely to be different in many respects from the Holy Apostles, it can still serve in the interpretation of the historical descriptions of the Constantinopolitan monument.

To conclude, neither the examination of written records alone nor isolated observation of affiliated monuments is sufficient to recapture

41 See Procopius, *De aed.*, 5.1.6, ed. and trans. Dewing, *On Buildings*, 316–19.

42 See Concina, *Venezia*, 33; Papacostas, "Medieval Progeny of the Holy Apostles," 386–89.

43 For the differences between the 9th-century basilica of San Marco and Justinian's church of the Holy Apostles, see Demus, *Church of San Marco*, 64. For the use of the church of the Holy Apostles as the model of the 9th-century basilica of San Marco, see A.H.S. Megaw, "Reflections on the Original Form of St. Mark's in Venice," in *Architectural Studies in Memory of Richard Krautheimer*, ed. C. Striker (Mainz, 1996), 107–10.

44 See J. Warren, "The First Church of San Marco in Venice," *The Antiquaries Journal* 70 (1990): 327–59; R. Mainstone, "The First and Second Churches of San Marco Reconsidered," *The Antiquaries Journal* 71 (1991): 123–37.

the lost form of the Holy Apostles.<sup>45</sup> It is rather the combination of these sources of knowledge that helps us to construct a new model for Justinian's Apostoleion. The reexamination of the descriptions of the church of the Holy Apostles by reference to the two affiliated monuments mentioned above helps to distinguish and interpret those parts of the descriptions that reflect the design of the Constantinopolitan church. This methodology starts from the identification of passages that refer to architectural components and design features. Each of these passages is then interpreted graphically by reference to similar components in affiliated churches. The present comparisons with St. John at Ephesos benefit from information that was not available previously. My recent work on this church has revealed new evidence regarding the building considered by Procopius to be identical to the Holy Apostles.<sup>46</sup> This helps us to examine the descriptions of our building in a new light, resolving some of the inconsistencies observed in previous reconstruction proposals. The following paragraphs provide a step-by-step reconstruction of the different components of the church of the Holy Apostles, starting with its plan.

### Shape and General Layout

The literary sources indicate that the church of the Holy Apostles was built on a cruciform plan.<sup>47</sup> Procopius's account adds the following detail: although the north and the south cross arms had a similar length, the western arm was "enough longer than the other [i.e., the eastern cross arm] to make the form of the cross."<sup>48</sup> Previous representations of the church do not seem to take this statement into account. They all show a church

built on what we often call a "Greek-cross" plan, that is, a cruciform plan with arms of equal length. Of course, it is likely that the authors of these reconstructions believed that the attachment of a narthex to the west arm made it longer.<sup>49</sup> However, this increase in length would be negligible: a narthex would have to be atypically wide to make a noticeable difference in the overall length. Besides, in most sixth-century churches, the roof of the gallery over the narthex was at a different level than the roof of the main church. It is questionable whether the volume of the narthex and the gallery could be perceived as part of an elongated cross arm. Therefore, the simple addition of a narthex hardly explains Procopius's observation.

The study of affiliated monuments leads to a different interpretation of this passage. Let us start with the church of St. John at Ephesos. Recent research has revealed an intermediate building phase that precedes the definitive Justinianic phase.<sup>50</sup> In this phase, the church had a cruciform plan with five main bays flanked by aisles and galleries (fig. 7.4). Although not all aspects of this plan can be determined, archaeological evidence proves that the single-bay west cross arm was longer than the others. This was probably achieved by extending the space of the central bay by adding a rectangular, subordinate bay to the west. This configuration would make the "entrance" cross arm larger than the others, and this would be noticeable both from the inside and the outside of the building.

If in St. John's our actual understanding of the west bay relies on tentative reconstruction, in San Marco, we observe a similar design in a surviving building (fig. 7.9). Here, too, the west cross arm is noticeably longer than the others.

<sup>45</sup> Indeed, as James (*Constantine of Rhodes*, 193) pointed out, "for a medieval church to be described as a 'copy' it needed to share only a very few features of its original, making its use to reconstruct problematic."

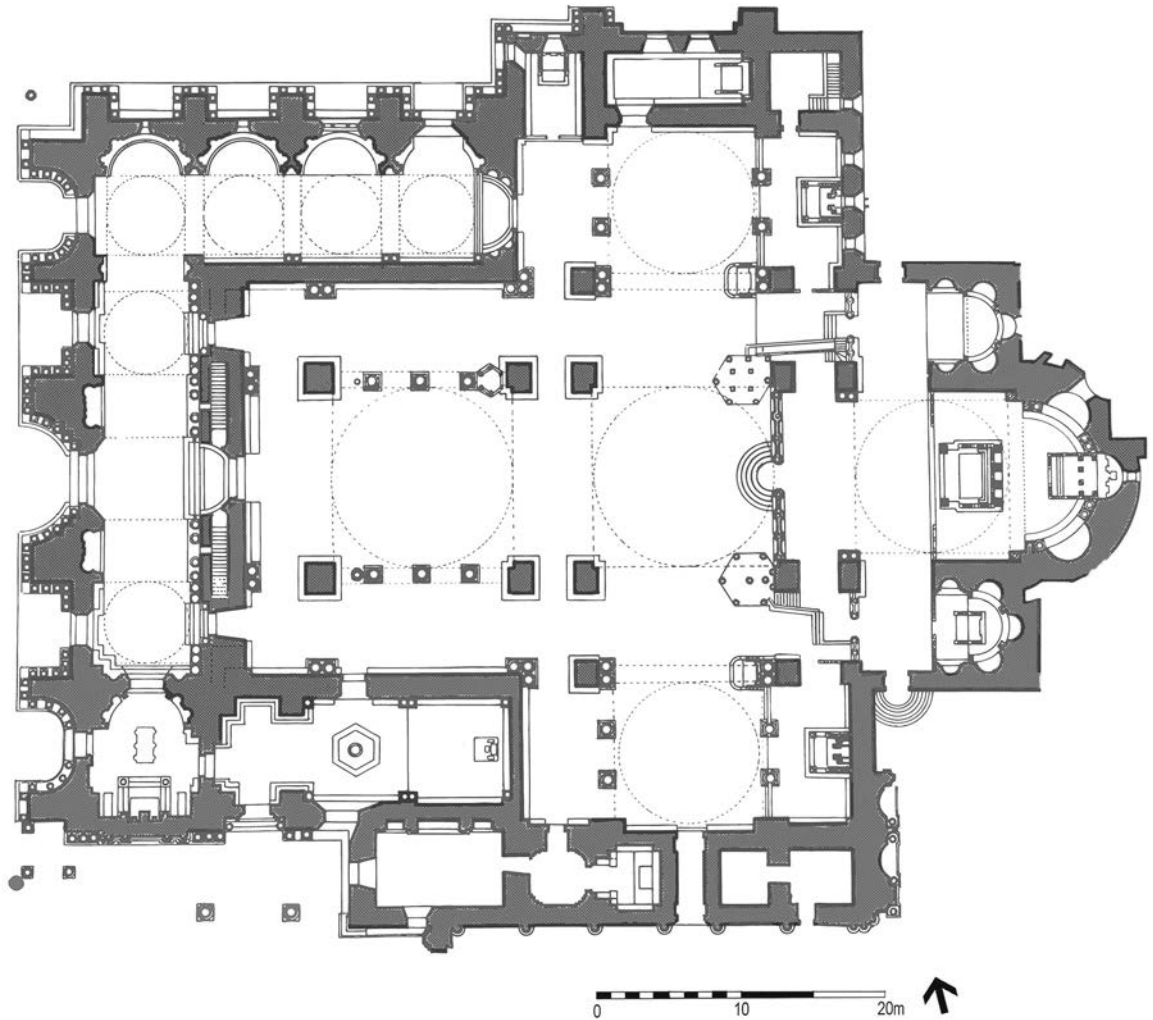
<sup>46</sup> See Karydis, "Church of St. John at Ephesos," 97–128; N. Karydis, "The Vaults of St. John the Theologian at Ephesos: Visualizing Justinian's Church," *JSAH* 71, no. 4 (2012): 524–51.

<sup>47</sup> See Constantine the Rhodian, *Ekphrasis*, line 576; and Mesarites, *Ekphrasis*, c. 13.5, ed. Heisenberg, *Apostelkirche*, 27; ed. and trans. Downey, "Nikoloas Mesarites," 869; trans. Angold, *Nicholas Mesarites* 93.

<sup>48</sup> See Procopius, *De aed.*, 1.4.13–14, ed. and trans. Dewing, *On Buildings*, 50–51.

<sup>49</sup> The existence of a narthex is attested by the *Book of Ceremonies* of Constantine VII Porphyrogenetos (*De ceremoniis aulae byzantinae*, II, 6, f.181). This states that when the emperors visited the church, they sometimes entered "through the great gate of the atrium into the narthex." Chapter VII of the same book mentions an alternative entrance, "through the gate which leads to the Horologion [i.e., the sundial] of this same church." For a translation of these passages, see J. M. Featherstone, "All Saints and the Holy Apostles: *De Cerimoniis* II, 6–7," *Nέα Πώμη* 6 (2009): 235–48, esp. 242–45.

<sup>50</sup> See Karydis, "Church of St. John at Ephesos," 120–21, for an attribution of this early building phase of St. John in Ephesos to the 520s, a period when Justinian had already started to play an important political role as principal adviser of his uncle and predecessor, Justin I.



**FIG. 7.9.** Plan of the Basilica of San Marco, Venice (after plan courtesy of Thomas E. A. Dale)

Indeed, the western arcades have three columns each, whereas the north and south ones only have two columns each. The integration of cross arms of different length is achieved in two ways. First, the west cross arm is lengthened by adding a barrel-vaulted, rectangular space next to the west bay, connecting the latter with the narthex. But this does not explain the enlargement of the west bay itself, which is sufficient to give its colonnades an extra column. This is achieved with a subtle refinement that is rarely observed: both west bay and crossing are wider than the other peripheral bays. At the transition from wide crossing to narrow bays lies a series of columns set against the central piers. These are strategically located to reduce the width of the north, south, and east bays, making the west one appear more spacious by comparison.

Observing the plans of St. John at Ephesos and San Marco in Venice, we realize that a centralized cruciform church with five bays does not necessarily have cross arms of equal length. In fact, the elongated west cross arm is common in cruciform basilicas built between the fourth and the sixth centuries. The Holy Apostles at Milan, the church of the Prophets, Apostles, and Martyrs at Gerasa, the *Katapoliani* on Paros, and the cruciform basilica on Thasos all include this characteristic.<sup>51</sup> With these examples in mind, we can interpret Procopius's statement as an indication that the Holy Apostles had a cruciform

51 For the churches in Milan and Gerasa, see R. Krautheimer, *Early Christian and Byzantine Architecture* (New Haven and London, 1986), 82 and 158, respectively. For the church on Thasos, see P. Lemerle, "A propos d'une basilique de Thasos et de Saint Jean d'Ephèse," *Byzantion* 23 (1953): 531–43.

plan outline with a slightly elongated entrance cross arm toward the west. As our examination of the basilica of San Marco indicates, it was possible to extend the west arm of the church without giving it a rectangular shape. The elongation of the west arm could be achieved simply by increasing the size of the square western bay. Neither Constantine the Rhodian nor Mesarites contradicts this observation.<sup>52</sup>

Let us now move to the east termination of the building. Most churches of this period had an apsed sanctuary at this point. But the church of the Holy Apostles seems to have been exceptional as far as the location of the sanctuary is concerned. Indeed, Procopius writes that “at the crossing . . . there was set aside a place which may not be entered by those who may not celebrate the mysteries; this, with good reason, they call the sanctuary.”<sup>53</sup> Central sanctuaries like this one are rare, but one is encountered at the crossing of the church of St. John at Ephesos.<sup>54</sup> Here, the space of the bema is surrounded by a three-sided colonnade and adjoined by an imposing synthronon, which connects the two east piers of the crossing (fig. 7.7). The account of Mesarites suggests that there was a similar configuration in the Holy Apostles. The “heart” (i.e., the crossing) of the church, Mesarites writes, “encloses within itself . . . the sacred thysiasterion, being semicircular at the east so much of it as lies about the steps of the sacred throne [i.e., the synthronon], but so much of it as lies about the holy table, on the west, being quadrangular.”<sup>55</sup> These accounts show clearly that the sanctuary of the Apostoleion and its synthronon lay in the center

of the church.<sup>56</sup> None of them mentions an apse in the east cross arm.<sup>57</sup> The absence of an apse there can be deduced from Mesarites’ observation that the central spaces of the church were surrounded by twelve colonnades.<sup>58</sup> This means that there was an aisle colonnade in every side of the perimeter of the church, including the eastern side. Therefore, the “traditional” apse was probably replaced by a straight colonnade. Thus, the eastern extremity of the building would have lost its usual role of terminus to become a vestibule for the Mausoleum of Constantine which, according to Mesarites, lay to the east of the church.<sup>59</sup>

The imperial mausoleums in the complex of the Holy Apostles constitute a vast topic that cannot be fully addressed in this paper. However, some notes regarding the two most important mausoleums are necessary to understand the immediate context of the church and its relationship with earlier structures.

Based on Mesarites’ description, most reconstructions of the Holy Apostles show the Mausoleum of Constantine as a domed rotunda attached to the east cross arm of the church.<sup>60</sup> In most models, there is direct access from the church to the tomb. Underwood’s reconstruction is the only one that inserts a vestibule between

52 James, *Constantine of Rhodes*, 185, interprets the lines 602–604 of the 10th-century ekphrasis as an implication that the cross arms of the church were of equal length. But, what the passage in question refers to is “a square space.” James believes that this passage describes the outline of the entire building. However, it is unlikely that Constantine would ever describe the entire church as “square” in shape. This can only refer to the shape of one of the bays.

53 See Procopius, *De aed.*, 1.4.13, ed. and trans. Dewing, *On Buildings*, 48–49.

54 Cf. Soteriou, “Ανασκαφαί,” 152–57, figs. 31, 32; M. Büyükkolancı, *Heilige Johannes* (Selçuk, 2000), 58.

55 See Mesarites, *Ekphrasis*, c. 38.1, ed. Heisenberg, *Apostelkirche* 80; ed. and trans. Downey, “Nikolaos Mesarites,” 890; trans. Angold, *Nicholas Mesarites* 124.

56 For one of the earliest and most detailed discussions of this central sanctuary, see Heisenberg, *Apostelkirche*, 134.

57 One might argue that the central location of a sanctuary precludes the existence of an apse at the east extremity of the building. However, the church of St. John at Ephesos proves that these elements are not incompatible.

58 See Mesarites, *Ekphrasis*, c. 37.6, ed. Heisenberg, *Apostelkirche* 79; ed. and trans. Downey, “Nikolaos Mesarites,” 890; trans. Angold, *Nicholas Mesarites*, 123. The term that Mesarites uses is “twelve stoa.” According to Downey (“Nikolaos Mesarites,” 869), “the term ‘stoa’ meant basically any type of structure which contained pillars,” but, in the present instance, the word refers to the colonnades which ran around the arms.

59 See Mesarites, *Ekphrasis*, c. 39.1, ed. Heisenberg, *Apostelkirche*, 81–82; ed. and trans. Downey, “Nikolaos Mesarites,” 891; trans. Angold, *Nicholas Mesarites*, 125.

60 Indeed, Mesarites, *Ekphrasis*, c. 39.2, ed. Heisenberg, *Apostelkirche*, 82; ed. and trans. Downey, “Nikolaos Mesarites,” 891; trans. Angold, *Nicholas Mesarites*, 125, states that the mausoleum, which he calls “church,” “is domical, and circular.” Its interior “is divided up on all sides by numerous stoaed angles.” Most scholars interpret these “stoaed angles” as niches, like the ones found in most imperial mausoleums. For a detailed discussion of this passage and an evaluation of different possible reconstructions of the Mausoleum of Constantine, see R. Egger, “Die Begräbnisstätte des Kaisers Konstantin,” *ÖJb* 16 (1913): 212–30.

the rotunda and the church.<sup>61</sup> This hypothesis is corroborated by the literary sources and similar examples in Rome. Indeed, the Mausoleum of Constantina (Sta. Costanza), is attached to the flank of the basilica of St. Agnes. The Mausoleum of Helena is connected with the center of the narthex of the basilica of Marcellinus and Petrus and is coaxial with the church.<sup>62</sup> Both mausoleums are directly attached to churches. The accounts of visitors from the eleventh to the fourteenth century suggest that there was a similar connection between the Mausoleum of Constantine and the church of the Holy Apostles. An eleventh-century visitor noted that the Mausoleum of Constantine lay at the “head of the church, at the east end.”<sup>63</sup> Around 1349, Stephen of Novgorod stated that “going straight east through the church from the sanctuary, [one comes to where] stands Emperor Constantine’s tomb.”<sup>64</sup> There is no mention of an apse or an open space between church and mausoleum. Another description, of approximately 1390, locates the mausoleum “behind the sanctuary” of the church, making the connection between the two appear even more direct.<sup>65</sup> However, the fact that these records do not mention intermediate spaces does not mean that these did not exist. We should also consider the possibility that in the sixth century, the Mausoleum of Constantine was still a freestanding structure inside an atrium, as it was described in Eusebius’s fourth-century *Life of Constantine*.<sup>66</sup> The setting

described by this source is reminiscent of the quadriporticus that surrounded the Mausoleum of Maxentius in Rome.<sup>67</sup> Eusebius’s description suggests that the original relationship of Constantine’s mausoleum to the nearby church was different from that of the Roman mausoleums mentioned above. Did the architects of Justinian alter this relationship by attaching the sixth-century church to the mausoleum? In the absence of sufficient evidence, this question has to remain open. Information about the location of the other mausoleums, including that of Justinian, is also limited. In his brief description of what he calls “the Heroon” of Justinian, Mesarites implies that this building was cruciform and entered from the west cross arm.<sup>68</sup> On the basis of this description, previous reconstructions show the mausoleum attached to the north transept of the Apostoleion.

If the relation of the mausoleums to the church remains unclear, the previous paragraphs shed new light on the layout of Justinian’s church. Written records and affiliated buildings seem to indicate that this was a cruciform church with an elongated west cross arm. Still, the passages examined so far tell us little about the articulation of the design and, particularly, the disposition of the main load-bearing elements that supported the vaults. Procopius mentions that the latter were “solidly and safely supported,” but does not provide any further information. To understand how these supports looked like, we need to turn to the descriptions of Constantine the Rhodian and Mesarites.

### Bays and Piers

All previous reconstructions of the Apostoleion show a cruciform arrangement of five square bays covered by spherical vaults, as confirmed in both middle Byzantine accounts. Mesarites

61 See Daskas and Gargova, *Underwood Drawings*, fig. 9. The narthex shown by Underwood is consistent with similar examples elsewhere (i.e., Sta. Costanza in Rome) as well as with a passage in the *Book of Ceremonies* of Constantine Porphyrogennetos (Book VI, 583), which explains that on the annual feast day of St. Constantine, the emperors entered the Holy Apostles, crossed the main body of the church and were received by the patriarch “inside the gate that leads in” the Mausoleum of Constantine.

62 See Johnson, *Roman Imperial Mausoleum*, 111, 140.

63 See the manuscript Digbeianus lat. 112, f. 17r–28v, published in K. Ciggaar, “Une description de Constantinople traduite par un pèlerin Anglais,” *REB* 34 (1976): 211–68.

64 See G. P. Majeska, *Russian Travelers to Constantinople in the Fourteenth and Fifteenth Centuries* (Washington, DC, 1984), 15–47.

65 See Johnson, *Roman Imperial Mausoleum*, 122.

66 See Eusebius, *Vita Constantini*, 4.58–60. This passage is discussed in Mango, “Constantine’s Mausoleum,” 55. On the basis of this account, Asutay-Effenberger and Effenberger

(*Porphyrsarkophage*, 129–33) suggest that Constantine’s mausoleum was originally a free-standing, circular structure.

67 See Johnson, *Roman Imperial Mausoleum*, 87.

68 See Mesarites, *Ekphrasis*, c. 40, ed. Heisenberg, *Apostelkirche*, 85–87; ed. and trans. Downey, “Nikolaos Mesarites,” 892–93; trans. Angold, *Nicholas Mesarites*, 127–28. This passage is discussed in Grierson, “Tombs and Obits,” 6, and G. Downey, “The Tombs of the Byzantine Emperors at the Church of the Holy Apostles in Constantinople,” *JHS* 79 (1959): 27–51, esp. 44.

states that the church was “raised on five stoas,” which formed a cruciform pattern. Constantine the Rhodian writes that the additive reproduction of the central bay toward the four cardinal points generated a cruciform structure consisting of five parts.<sup>69</sup> For all the poetic character and lack of detail of these documents, their authors clearly explain the modular character of the building. Their observations match what we know about sixth-century vaulted churches. Similar modular plans are observed in affiliated monuments, such as St. John at Ephesos and San Marco. They are also encountered in early Byzantine domed churches in the Aegean coastlands, Constantinople, and, particularly, west Asia Minor.<sup>70</sup>

Compartmentalization of the church interior into bays was directly related with the choice of vaulted ceilings consisting of multiple domes. Indeed, as Krautheimer has observed, domes “are geared to cover a rectangular bay.”<sup>71</sup> The presence of multiple domes in the Holy Apostles is attested by Procopius, who calls them “spheroidal” or “spherical” vaults, and Constantine, who uses the term “spheres.”<sup>72</sup> Such spherical vaults are usually supported on broad arches resting on bulky piers at the corner of each bay. These piers interrupt the continuity of colonnades, dividing the interior into bays. The autonomy of the bays depends on pier design. Large, compact piers disrupt the continuity of a basilican plan. Projecting into the nave, they encapsulate spaces that can be seen as subordinate bays in their own right. These

69 See Constantine the Rhodian, *Ekphrasis*, line 575, discussed in James, *Constantine of Rhodes*, 58.

70 Two characteristic examples of this development are the so-called Building D at Sardis, and the church of St. John at Philadelphia. The interiors of the so-called Basilica B at Philippi and Hagia Eirene at Constantinople were also articulated in 2 domed bays, even though these churches belong to a different type from the buildings mentioned above. For further information regarding this architectural development, see H. Buchwald, “Western Asia Minor as a Generator of Architectural Forms in the Byzantine Period: Provincial Back-Wash or Dynamic Center of Production,” *JÖB* 34 (1984): 200–234, and N. Karydis, *Early Byzantine Vaulted Construction in Churches of the Western Coastal Plains and River Valleys of Asia Minor* (Oxford, 2011).

71 See Krautheimer, *Early Christian and Byzantine Architecture*, 238.

72 These terms may describe either full hemispherical domes on pendentives or shallow domes, cospherical with the pendentives (pendentive domes).

lateral enlargements of the central space subvert the concept of the basilica as an elongated, directional hall. Indeed, envisioning the interior of the church of St. John at Ephesos, Krautheimer remarks that “the overall impression is of individual spatial units clearly segregated from each other” and that “the bays, cut off from each other by the . . . strong projecting piers, seem to stand side by side.”

On the other hand, in San Marco, the pier design reduces the compartmentalization of the interior space. Here, the main piers are not solid but dissolve into a cluster of supports. Passages penetrate the piers, making their inner chambers parts of the aisles and galleries that flank the central bays. As a result, the piers are much less intrusive and do not disrupt spatial continuity. Such composite piers are not limited to eleventh-century Venice. The piers of Hagia Sophia and Hagia Eirene at Constantinople indicate that this pier design was known in the capital during Justinian’s period. Indeed, Constantine the Rhodian suggests that this design was employed in the piers of the Holy Apostles as well. According to his account, the piers at the four corners of the crossing were “four-legged and quadripartite in composition.”<sup>73</sup> This description strongly resembles the central, quadripartite piers at the crossing of San Marco.

It seems, therefore, that like the crossing of San Marco, that of the Holy Apostles had four composite piers in its corners: each pier consisted of four smaller supports and was penetrated by passages. Describing this configuration, Constantine the Rhodian states that there were sixteen supports in total. Now, the interpretation of this number has proven to be particularly challenging. To understand this number, it is important to note that it refers only to the piers in the four corners of the crossing.<sup>74</sup> Constantine never

73 See Constantine the Rhodian, *Ekphrasis*, lines 564–606, ed. James, *Constantine of Rhodes*, 56–61.

74 Constantine the Rhodian, *Ekphrasis*, lines 591–604, ed. James, *Constantine of Rhodes*, 58–61, states that the architect “set up in four groups four foundations, four in number, equal to the towering piers, using everywhere the measure of four, so that sixteen well-arranged towering piers, four-sided and four-fold in composition all formed the same number of vaults [i.e., barrel vaults supporting the domes].” Thus “a cubical shape was traced.” The reference of this passage to 16 towering piers lends itself to misinterpretation. For instance,

mentions the piers at the extremities of the cross arms, even though their presence is implied in his text.<sup>75</sup> The latter would have been necessary to support the spherical vaults over the cross arms, and there is no reason to think that they were different from the central ones. The silence of our records regarding these piers may indicate that they were concealed by the screens of the aisles and the galleries, which now come to our attention.

### Arcades and Clerestory Walls

The juxtaposition of massive masonry piers and colonnades consisting of slender columns is one of the hallmarks of vaulted church architecture in the times of Justinian. Both piers and columns played an important role. The former supported the soaring vaulted canopies, which covered the central bays. The colonnades supported the gallery floors and the clerestory walls, and separated the central bays from the more intimate area of the aisles and galleries. Colonnades functioned as “internal elevations,” adorned with sophisticated sculptural elements, such as capitals and bases, as well as with the same polychromous marble revetment as the piers. The great prominence of these colonnades in the Holy Apostles is reflected in the middle Byzantine accounts of the monument. Both of them devote extended and detailed

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Reinach (“Commentaire archéologique,” 96) believed that this is the total number of piers in the peripheral bays. But the reference to one cubical shape (i.e., a shape with a square plan) makes the attribution of this passage to the cross arms unlikely. Soteriou (“*Ἀνασκαφαί*,” 210) misread this as a reference to the total number of piers, and claimed that the figure given by Constantine is mistaken. Angelidi (“*Ἡ περιγραφή*,” 110), was the first to notice that the passage refers only to the crossing and to interpret the number correctly as the total number of piers in the crossing. However, James, *Constantine of Rhodes*, 185, recently suggested that the passage refers to the entire building. Nonetheless, Angelidi’s remains the most reliable interpretation of this passage.

75 Indeed, in his first reference to piers (line 564), Constantine the Rhodian addresses only those supports that “bear . . . the central dome and the supporting arches.” The second relevant passage (lines 589–604) refers only to those piers that enclose the space with a “cubical shape”—a term that the author uses earlier in his description of the crossing. According to the author, this area had “sixteen well-arranged piers, four-legged and quadripartite.” Finally, the 3rd passage (lines 605–607) simply mentions that the piers at the gallery level “were placed above those set below.” None of these passages discusses the peripheral piers. Angelidi (“*Ἡ περιγραφή*,” 110) came to a similar conclusion.

passages to them, and help us complete the visualization of the church in both plan and section.

According to Constantine the Rhodian, next to the central bays lay a series of spaces vaguely designated as “another internal structure,” which “ran around the whole church in a circuit.”<sup>76</sup> This has been plausibly interpreted as a circuit of aisles and galleries, and this is how scholars have visualized it so far. Most models show a “ring” of arcades that connect the piers, enveloping the central space. Reminiscent of the layout of a centralized building, this exact configuration is not found in any affiliated monument. In St. John at Ephesos, the closest example to this description, there is no arcade connecting north and south aisles in the west and east extremities of the building. Yet Constantine’s addendum to the previous passage seems unequivocal: the architect of the Holy Apostles “joined together the arcades from the right and the second aisle, in a circuit to run around the whole church.” Mesarites confirms this, stating that the aisles consisted of twelve “stoas” (i.e., porticoes). This indicates that there was an inward-oriented portico in each side of the perimeter (including the east termination of the building). If these accounts imply that aisles and galleries ran without interruption along the perimeter of the north, south, and east cross arms, it is not certain that the same configuration was found in the west arm of the cross: there, a connection of the lateral aisles would have been provided by the narthex, which could have been included in Mesarites’ count as one of the twelve “stoas.”

According to most reconstructions published so far, these twelve “stoas” were screened by double-storied arcades with four columns each. This means that there would be forty-eight columns on each level (evenly distributed to the four arms of the cross) and a total number of ninety-six columns. These figures agree with the column numbers given by Constantine the Rhodian.<sup>77</sup> Still, they do not correspond entirely

76 See Constantine the Rhodian, *Ekphrasis*, lines 705–710, ed. James, *Constantine of Rhodes*, 66–67.

77 Constantine the Rhodian, *Ekphrasis*, lines 715–725, ed. James, *Constantine of Rhodes*, 66–69, states that there were 12 columns in the ground floor of each cross arm, and that “all those columns drawn up below number forty plus eight supporting the roof of the colonnade. And in those above, you

to those mentioned by Mesarites. The latter states that the church had twelve double-storied colonnades and *approximately* seventy columns in total, a number that, according to him, had a symbolic significance.<sup>78</sup> This figure is far from what is shown in most reconstructions. Soteriou published the only reconstruction that matches the figures proposed by both accounts. This shows forty-eight columns on the ground floor, evenly distributed in the cross arms. Emulating the aisles of St. John at Ephesos, those in Soteriou's reconstruction are defined by double rows of columns, including pairs of columns that stand against the external wall. As in Ephesos, the columns against the wall occur only at the level of the aisles. This would bring the total number of columns to seventy-two (forty-eight on the ground floor and only half, i.e., twenty-four on the galleries). This configuration shows that it is possible to reconcile both Constantine's number of forty-eight columns on the ground floor and Mesarites' estimate of a total number of approximately seventy columns. Providing a plausible interpretation of the written records and based on a scheme observed in an affiliated monument, the column layout in Soteriou's proposal needs to be taken into account in the reconstruction of the aisles and the galleries of the Apostoleion.

The above column layout needs to be combined with our hypothesis regarding the elongated west cross arm. It is very likely that the aisles and galleries of the north, south, and east cross arms were equipped with screens of two columns each. The elongated, west cross arm would probably have required one more column in each screen. This allocation of columns is identical to the column layout of San Marco in Venice, where the entrance bay is flanked by colonnades with three columns each (fig. 7.9). This reconstruction

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would find with good reason rose-coloured columns in the same numerical measure."

78 Mesarites, *Ekphrasis*, c. 37.6, ed. Heisenberg, *Apostelkirche*, 79; ed. and trans. Downey, "Nikolaos Mesarites," 890; trans. Angold, *Nicholas Mesarites*, 123, writes: "for the stoas [i.e., colonnades] which support the whole church are twelve in number, and the columns which support these colonnades are close to seventy, a detail arranged by the architect not without purpose, I think, but in order that this might be indeed a living Church of Christ, supported by colonnades and columns equal in number to the disciples of Christ."

agrees with both middle Byzantine accounts, as well as with Procopius's reference to an elongated west cross arm.

It is unfortunate that the above records fail to provide any information about clerestory windows or the area between the roof of the galleries and the intrados of the broad arches supporting the dome. Visualizing this area is essential to figuring out how the interior of the Holy Apostles was lit. So far, two different reconstruction theories have been proposed for this part of the structure. Heisenberg and Underwood's team claimed that the gallery colonnades were only used to screen off the areas of the galleries and did not support any clerestory wall. This aspect of their reconstructions was inspired from the galleries of monuments such as San Marco in Venice and Hagia Eirene in Constantinople (fig. 7.10). In these buildings, the galleries are covered by the broad arches that support the domes. These arches extend from the sides of the central bays to the perimeter of the building, where the perforated clerestory walls lie. The latter are independent from the gallery colonnades, which are sometimes omitted in the present condition of the monuments. This is how Heisenberg and Underwood envisioned the galleries of the Holy Apostles (figs. 7.6 and 7.8).<sup>79</sup> However, this seems to contradict Mesarites' statement, according to which the double-storied colonnades appeared to support the entire structure.<sup>80</sup> Mesarites' observation is hardly compatible with a scheme in which the gallery colonnades do not hold any superior structure. Instead, it implies that there was some kind of connection between the colonnades and the vaults.

Wulff's reconstruction proposal seems to be the only one to show a connection between gallery colonnades and vaults: here, the gallery colonnades are surmounted by clerestory walls, which reach the intrados of the broad arches.<sup>81</sup> According to this scenario, these arches do not cover the entire gallery (a separate roof plays

79 Cf. Heisenberg, *Apostelkirche*, pl. V, and Daskas and Gargova, *Underwood Drawings*, fig. 10.

80 See Mesarites, *Ekphrasis*, c. 37.6, ed. Heisenberg, *Apostelkirche*, 79; ed. and trans. Downey, "Nikolaos Mesarites," 890; trans. Angold, *Nicholas Mesarites*, 123.

81 See Wulff, "Sieben Wunder," 323.



**FIG. 7.10.**  
Church of  
Hagia Eirene,  
Constantinople,  
view of the interior  
from the sanctuary,  
looking west (photo  
by E. Rizos, 2010)



this role). This reconstruction of the colonnades agrees with Mesarites' account and resembles the configuration of the galleries and clerestory walls in the church of St. John in Ephesos (fig. 7.11).

Let us now focus on the clerestory walls above the gallery roof of the Holy Apostles. Owing to the lack of evidence, it is impossible to establish the form of the windows at this part. These may have resembled the arched windows currently found in the clerestory walls of Hagia Sophia or Hagia Eirene.<sup>82</sup> However, we should also consider the possibility that these were big "thermal" windows. Indeed, mullions that belonged to the "thermal" windows were found in St. John at Ephesos.<sup>83</sup> Given the similarity between the

St. John and the Apostoleion, it is possible that the latter also had similar windows in its clerestory walls (fig. 7.12).

The overall configuration discussed above explains the emphasis that Constantine the Rhodian puts on the crossing and his reluctance to mention the piers and arches of the peripheral bays of the church. Colonnades and clerestory walls would have concealed these elements. The only piers and arches that revealed their entire bulk to the visitor must have been the ones at the crossing. The central piers would have been visible from two sides, and the arches they carried were the only ones not to be filled with colonnades. These four quadripartite piers and the massive open arches they supported (mentioned by Constantine in lines 595–600) would have stood out, making the central sanctuary the climax of the monument's interior space.

82 It is worth noting that, according to Rowland Mainstone, *Hagia Sophia: Architecture, Structure, and Liturgy of Justinian's Great Church* (London, 1988), 275, the original tympana of Hagia Sophia had mullioned windows, similar to that currently at the west elevation of the building.

83 For a reconstruction of the church of St. John in Ephesos with "thermal" windows, see A. Thiel, *Die Johanneskirche in Ephesos* (Wiesbaden, 2005), 42–48. Previous reconstructions

of the monument showed its tympanum walls pierced with rows of arched windows.



**FIG. 7.11.** Reconstruction of the church of St. John in Ephesus, perspective view of the interior, looking east. Notice the “thermal” windows at the top of the lateral screens (drawing by author, 2013).



**FIG. 7.12.** Church of the Holy Apostles. Reconstructed cross-sections of the east cross arm, showing two alternative clerestory walls. The left version displays a window pattern similar to that of Hagia Eirene in Constantinople. The right version explores the possibility of “thermal,” mullioned windows similar to those of Hagia Sophia in Constantinople and St. John at Ephesus (drawing by author, 2016).

**FIG. 7.13.**  
Basilica of San Marco,  
Venice. View of the  
east cross arm from  
the crossing. Notice  
the paired columns  
framing the passage  
to the east cross arm.

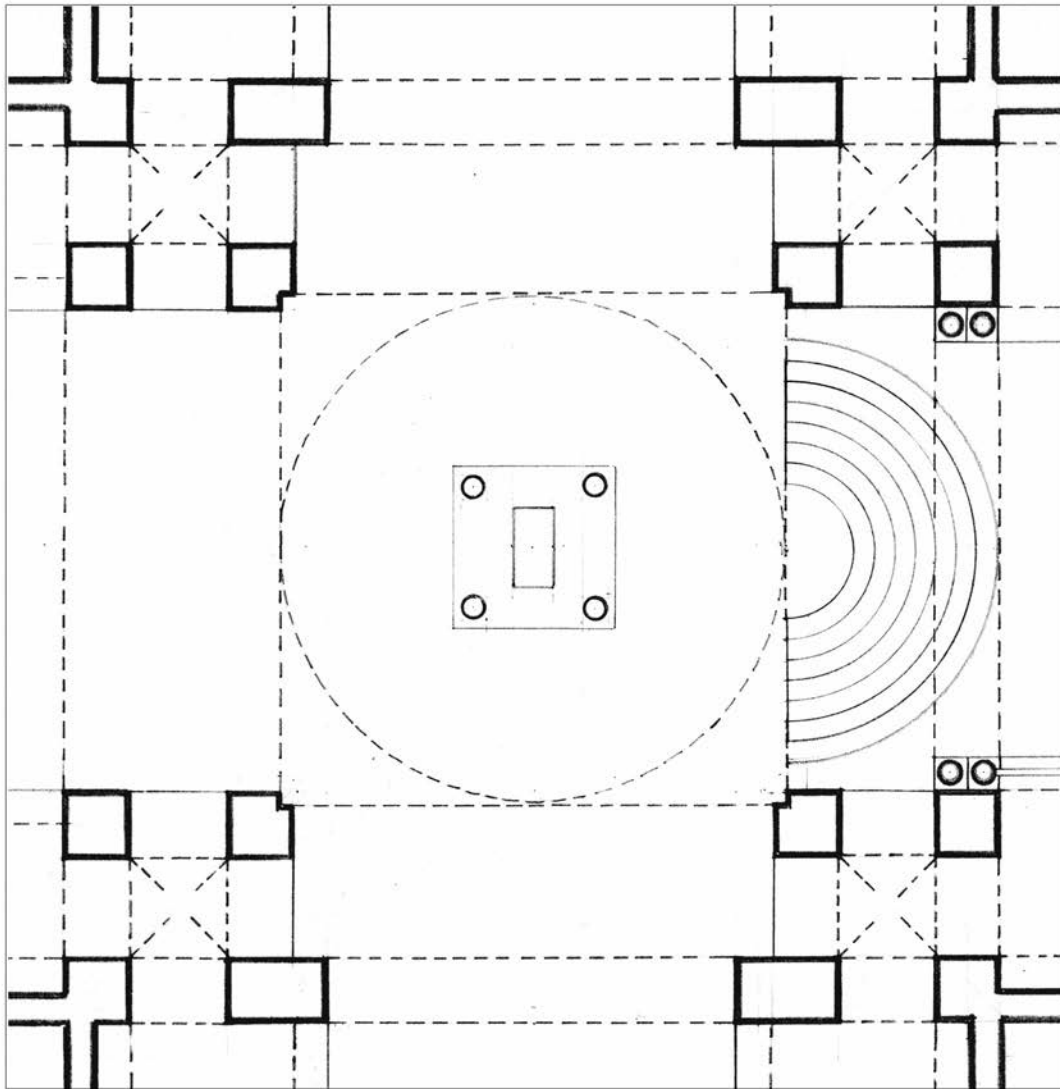
The description of  
Constantine of Rhodes  
indicates that similar  
“double columns”  
were used in the east  
cross arm of the Holy  
Apostles (photo by  
author, 2010).



Before completing our survey of the church’s columns, it is worth noting that there remains one aspect of Constantine’s description that has not yet found a convincing interpretation. Beginning with his detailed description of “the marvelous columns and their nature and colour,” Constantine refers to two sets of “double columns” made of polychromous marble, positioned

“in the light-bearing east, one on the right side, the other . . . on the left side.”<sup>84</sup> Soteriou claimed that these columns belonged to the colonnades of the east extremity of the building and were, therefore, similar to the columns in all other

<sup>84</sup> See Constantine the Rhodian, *Ekphrasis*, lines 686–703, ed. James, *Constantine of Rhodes*, 64–67.



**FIG. 7.14.** Church of the Holy Apostles. Preliminary, reconstructed plan of the crossing. Notice the four “quadripartite” piers and the layout of the sanctuary, which includes a ciborium and a synthronon. It is likely that the space of the sanctuary was surrounded by some form of barrier, such as a colonnade or a parapet wall, which restricted access to it (drawing by author, 2016).

cross arm.<sup>85</sup> But this interpretation does not take into account Constantine’s special emphasis on these columns and their separate treatment in his text, not to mention the author’s implication that such double columns were used only at the east end of the church.<sup>86</sup> Taking into account these considerations, Heisenberg claimed that the double columns were independent of the colonnades.<sup>87</sup> However, like Underwood four decades later, Heisenberg does not seem to

have managed to establish the exact position of these elements.

A careful observation of San Marco helps to resolve this problem. Indeed, double columns constitute one of the most prominent aspects of the design of this monument (fig. 7.13). These pairs of columns are set against the central piers, close to the north, south, and eastern peripheral bays (see fig. 7.9). Now, the role of the north and south double columns is to “mask” the transition from the crossing to the slightly narrower lateral bays. As we have seen, a similar difference in width between the crossing and three of the peripheral bays must have also existed in the Holy Apostles. The transition from the crossing to the narrower bays could have been achieved

85 See Soteriou, “*Ἀνασκαφαί*,” 212.

86 See Constantine the Rhodian, *Ekphrasis*, line 700. For a discussion of this passage see James, *Constantine of Rhodes*, 124n205.

87 See Heisenberg, *Apostelkirche*, 130–31.

either by a wall projection from the main body of the piers or, rather more elegantly, by setting pairs of columns like the ones of San Marco against the piers themselves. Constantine the Rhodian implies that the double columns were positioned in the east cross arm. This indication and our observation of similar elements in San Marco seem to suggest that the double columns of the Holy Apostles were set against the two eastern piers of the crossing to provide a harmonious transition from the central to the narrower eastern bay. Located just behind the synthronon described by Mesarites, these columns must have enhanced the view toward the crossing, reinforcing its role as the “heart” of the building (fig. 7.14). The emphasis on this space was enhanced by the articulation of the vaulted roof, which is examined in the following paragraphs.

### Vaults

From the form of the piers to the shape of the bays, most of the features we have examined so far were geared to support the central vaults. Written records suggest that these were “spherical,” and there is a tendency to visualize them as hemispherical domes on pendentives [i.e., spherical triangles], like the original domes of San Marco.<sup>88</sup> However, a reinterpretation of the written records by reference to comparable monuments elsewhere suggests that the vaulted pattern of the Constantinopolitan monument may have been more varied than we thought.

Let us start the examination of the spherical vaults from their base. Both Procopius and Constantine the Rhodian suggest that each vault was supported on four broad arches that sprang from the piers.<sup>89</sup> According to the same sources, these arches were bound together with pendentives that ensured the transition from the square plan

88 Cf. Wulff, “Sieben Wunder,” 323, and Heisenberg, *Apostelkirche*, pl. V. Gurlitt (*Baukunst Konstantinopels*, pl. 8p) envisioned only the central vault as a dome on pendentives and reconstructed the peripheral vaults as pendentive domes (i.e., shallow domes on pendentives, where the crown of the dome is cospherical with the pendentives).

89 After his description of the piers, Constantine the Rhodian refers to the broad arches as “vaults of circular composition.” See Constantine the Rhodian, *Ekphrasis*, lines 577 and 622, ed. James, *Constantine of Rhodes*, 58–59, 60–61. See also Procopius, *De aed.*, 1.4.14, ed. and trans. Dewing, *On Buildings*, 50–51.

of the bay to the circular springing of the dome.<sup>90</sup> There is nothing problematic here: the two authors are clearly describing the base of a typical domed compound, such as the ones observed in several vaulted churches from Constantinople to Venice. If the descriptions of the lower levels of the vaults are clear, the descriptions of the domes themselves are not entirely consistent and require detailed examination.

Procopius starts his description by stating that the great dome over the crossing “resembled that of the church of [Hagia] Sophia [at Constantinople].”<sup>91</sup> The sixth-century author refers to the first, short-lived dome of Hagia Sophia, which collapsed in 558.<sup>92</sup> This early dome had a shallower profile than the current one. With its crown 6.5 meters lower, the original dome must have had a radius of curvature similar to that of the pendentives themselves. Yet, the first dome of Hagia Sophia was not exactly a pendentive dome: pendentives and the central dome were separated by a cornice and a series of windows at the base of the dome. According to Procopius, the church of the Holy Apostles also had a similar fenestrated dome base, which he calls “kykloteres” (i.e., circular form). But this feature was encountered only in the central dome, distinguishing it from the peripheral domes. On the basis of this description, one could visualize the central dome of the Apostoleion as a shallow dome with its base

90 The reference to the pendentives is slightly obscure. Procopius (*De aed.*, 1.4.15, ed. and trans. Dewing, *On Buildings*, 50–51) refers indirectly to pendentives by stating that the arches were “bound together.” Constantine (lines 623–624) mentions that the broad arches were connected with intermediary, circular structures that he calls “σφενδόνας”—i.e., “slings.” Now, this is a very good description of a pendentive. James’s (*Constantine of Rhodes*, 61) recent translation of the term “σφενδόνη” as “arch” may need to be reconsidered.

91 Procopius, *De aed.*, 1.4.14, ed. and trans. Dewing, *On Buildings*, 50–51.

92 J.A.S. Evans, “The Dates of the Anecdota and the De Aedificiis,” *Classical Philology* 64, no. 1 (1969): 29, claims that Procopius’s description of Hagia Sophia cannot postdate the collapse of the first dome of the “Great Church” in 558. R. Taylor, “A Literary and Structural Analysis of the First Dome on Justinian’s Hagia Sophia, Constantinople,” *JSAH* 55, no. 1 (1996): 66–78, agrees with this and states that “there is no question that the dome Procopius described was the first one.”

perforated with windows, and the dome over the cross arms as pendentive domes.<sup>93</sup>

Four centuries later, Constantine the Rhodian also observes the difference between the central dome and the peripheral ones.<sup>94</sup> But this is the only similarity with Procopius's account. Constantine does not describe the central dome as a shallow spherical vault (similar to the first dome of Hagia Sophia), but as "a sphere cut in half." This clearly refers to a hemispherical dome on pendentives as opposed to a pendentive dome. According to Constantine, the central, full dome was connected with "a composition of spherical forms." By that he probably means a series of spherical vaults over the cross arms. The fact that these are not "spheres cut in half" may suggest that these "spherical forms" were not complete hemispheres but shallower pendentive domes. Indeed, later in his text, Constantine states that the ceiling included "four equal spheres" as well as a central sphere, which "was arranged by the craftsman so as to be preeminent and lord of all."<sup>95</sup> This statement seems to confirm the reconstruction according to which the hemispherical profile was limited to the "prominent" central dome, which stood amid shallower vaults.

Writing more than two centuries later, Mesarites seems to confirm Constantine's claim that the central dome was hemispherical and distinctively elevated in relation to the other domes.<sup>96</sup> However, this late account suggests that each of the bays were "brought to completion in the shape of a perfect hemisphere." Following this statement, which seems to indicate a series of

full hemispherical domes, Mesarites goes on to describe the central dome in more detail. In this passage, he mentions a series of lines that connected the top of the vault with its base. This effect of meridian lines could have been created by a gored domed shell or a dome reinforced by ribs.<sup>97</sup>

We are, therefore, confronted with three different accounts. Procopius seems to be implying that there was a shallow dome with a fenestrated base over the crossing and even shallower pendentive domes over the cross arms. On the other hand, the description of Constantine the Rhodian indicates a full hemispherical dome on pendentives over the crossing and, perhaps, pendentive domes over the cross arms. Finally, Mesarites seems to suggest that all the main bays, including the crossing, were covered by hemispherical domes on pendentives, without clarifying what exactly made the central dome more prominent than the others. It is possible that the differences between these descriptions indicates the transformation of the church from the sixth to the twelfth century, but, unfortunately, the lack of detail of these accounts makes it difficult to draw definitive conclusions.

Almost all the reconstructions of the vaults of the Holy Apostles show a series of hemispherical domes. Consistent with Mesarites' description, this vault pattern is similar to that of San Marco in Venice. In spite of the indirect evidence for pendentive domes in the accounts of Constantine the Rhodian and Procopius, this possibility has not been investigated further. However, my recent reconstruction of the church of St. John at Ephesus suggests that these descriptions need to be reconsidered.<sup>98</sup> Indeed, the investigation of the fragments of the vaults of the Ephesian monument showed that a hemispherical dome on pendentives marked the crossing of the church, and pendentive domes covered the main bays of the cross arms (fig. 7.4). This vault pattern agrees with many aspects of Constantine's description, especially

93 The fact that Procopius compares the central dome of the Apostoleion with the 1st, shallow dome of Hagia Sophia seems to have been overlooked by Epstein, "Rebuilding and Redecoration," 80 and James, *Constantine of Rhodes*, 185. Both authors believe that Procopius describes a vaulted ceiling with five hemispherical domes on pendentives.

94 See Constantine the Rhodian, *Ekphrasis*, lines 577–582, and 625–626. Our current translation is based on that in James (*Constantine of Rhodes*, 61) with some amendments by the author.

95 See Constantine the Rhodian, *Ekphrasis*, line 626, ed. James, *Constantine of Rhodes*, 60–61.

96 According to Mesarites, *Ekphrasis*, c. 13.5–7, ed. Downey, "Nikolaos Mesarites," 869, the central bay "stands up above [the peripheral bays], and . . . faces toward heaven . . . it binds the other four [bays] to itself . . . and stands there as a kind of mediator."

97 For a discussion of Byzantine ribbed domes and further references, see R. Ousterhout, "Building Medieval Constantinople," *Proceedings of the PMR Conference 19–20* (1996): 35–67, esp. 48 and 66; C. Mango, *Byzantine Architecture* (Milan, 1978), 11; and A. Choisy, *L'art de bâtir chez les Byzantins* (Paris, 1883), 67.

98 See Karydis, "Vaults of St. John," 524–51.

his suggestion regarding the prominence of the central vault. We should, therefore, consider the possibility that at least the peripheral bays of the Holy Apostles were covered with pendentive domes.

### The Scale of the Church

If the domed bays of the Holy Apostles were built in a scale similar to that of the greater foundations of Justinian, their serial arrangement must have generated an impressively large space. Depending on its size, this space could have either been overwhelming or given the impression of a lofty, yet protective enclosure. Establishing the exact scale of the Holy Apostles would help to gain a better sense of the impact of the church on the visitor. Unfortunately, information about the size of the building is limited. Our only sources of information are the comparison with similar buildings and the hypothetical evidence derived from the original Fatih Camii.

Procopius states that the dome above the sanctuary of the Holy Apostles was inferior to that of Hagia Sophia in size. This comparison is not helpful, as with its 31-meter diameter, Hagia Sophia's dome would have obviously been unique. Standard monumental construction of this period could attain a scale similar to that of St. John in Ephesos, a building whose central bay measured 14 by 14 meters and the peripheral ones 12.5 by 12.5 meters. The corresponding dimensions in San Marco are 13 by 13 meters and 10.5 by 10.5 meters, respectively. The alleged resemblance between these buildings and the Apostoleion may indicate that the latter had a similar size. But this is an argument from silence. Indeed, one could argue that the special symbolic meaning of the Constantinopolitan building and its location at the imperial capital could have justified a bigger scale than that of its "provincial" counterparts.

Further indications about the size of our church may be drawn from its presumed site, which, according to most authors, corresponds to the actual site of the Fatih Camii.<sup>99</sup> The original

99 This theory has been criticized in A. Berger, "Streets and Public Spaces in Constantinople," *DOP* 54 (2000): 161–72, esp. 168–69.

mosque was built by Mehmed II in 1471. Still, its prayer hall and some of its dependencies were rebuilt after an earthquake in the 1770s. Having analyzed these phases, Ken Dark and Ferudun Özgümüş identified a series of pre-Ottoman fragments in the substructures of the mosque and attributed them to the church of the Holy Apostles.<sup>100</sup> Unfortunately, these fragments are insufficient to trace a coherent design layout. However, the analysis of the reconstructed plan of the fifteenth-century mosque of Mehmed II provides valuable indications about the scale of the pre-Ottoman structure on this site.<sup>101</sup>

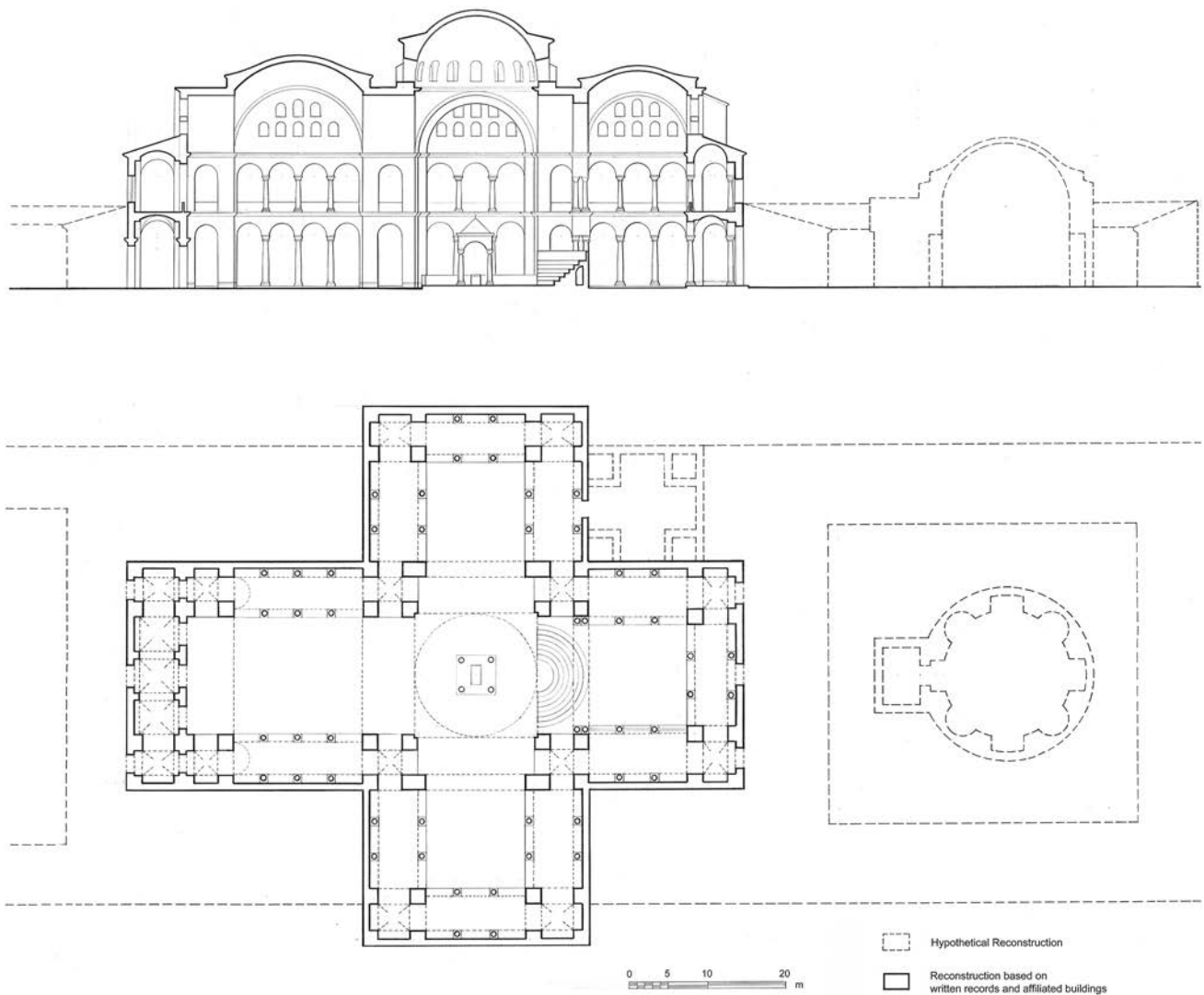
The original Fatih Camii formed part of a funerary, socioreligious complex that included eight madrasas, arranged in a bilaterally symmetrical layout. Situated at the heart of this complex, the prayer hall had its central space covered by a dome near the entrance and a semidome near the mihrab. A cemetery garden lay to the east of this hall and included the turbe of Sultan Mehmed II and his wife, Gülbahar Hatun, both of which were rebuilt in the eighteenth century.<sup>102</sup> The main entrances to the mosque are quite enigmatic in terms of design.<sup>103</sup> Even though the two lateral stairways align with the entrance portico, they are poorly integrated in the plan. They are asymmetrically bisected by the northwest wall and its minarets, which invade the main landings. It is difficult to justify this slipshod, accidental element in what is otherwise an ordered, symmetrical design. A possible explanation could be that the two staircases were built on foundations of the pre-Ottoman building on this site. Indeed, pre-Ottoman fragments have been identified

100 See Dark and Özgümüş, *Constantinople*, 93. These fragments are incorporated into the walls of the vast platform on which the central mosque is built. Running, like the walls, in a northwest-southeast direction, these fragments are found at the foot of the walls of the courtyard and the prayer hall, in the base of the window-pierced precinct wall of the mosque's cemetery garden, as well as in the substructures of the northeast staircase. See below, Raby, 258–64.

101 For the reconstruction of the original mosque of Mehmed II, and further references regarding its building history, see G. Necipoğlu, *The Age of Sinan: Architectural Culture in the Ottoman Empire* (London, 2005), 77–103.

102 For a detailed description of the original mosque and its dependencies, see G. Goodwin, *A History of Ottoman Architecture* (London, 1971), 121–31.

103 See Necipoğlu, *Age of Sinan*, 84.



**FIG. 7.15.** Complex of the Holy Apostles. Reconstructed Plan and Longitudinal Section showing the sixth-century church (left), the fourth-century Mausoleum of Constantine (right), and the sixth-century Mausoleum of Justinian (upper right corner). The form of the two mausoleums cannot be established with certainty. The hypothetical reconstruction of Constantine’s mausoleum is based on the description of the building in Eusebius’s *Life of Constantine* (drawing by author, 2016).

in the northeast staircase.<sup>104</sup> This suggests that the Byzantine building on this site had two lateral projections with an approximate width of 30 meters. If this building was the church of the Holy Apostles, then these lateral projections could be interpreted as the extremities of the two transept arms. A width of about 30 meters would place these cross arms between those of San Marco in Venice (about 25 meters) and those of St. John in Ephesos (about 32 meters). However, in the

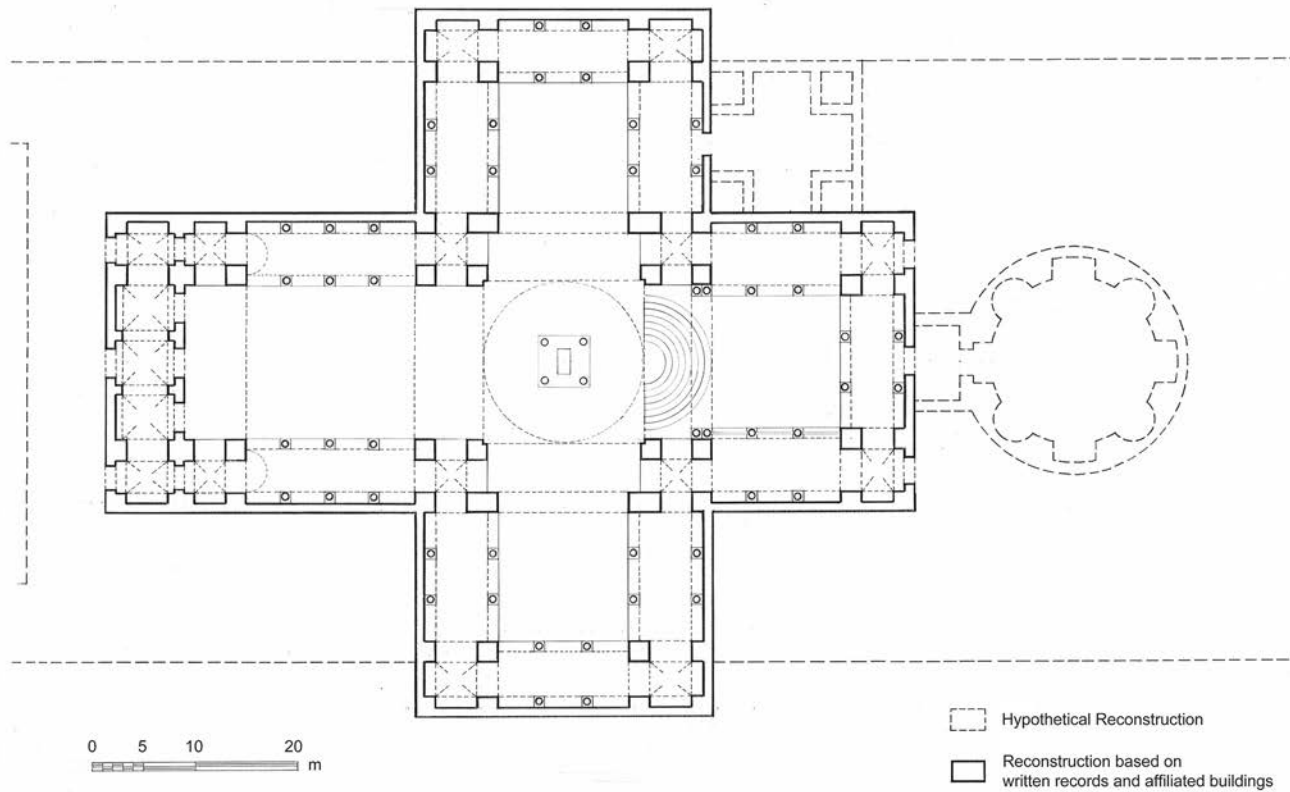
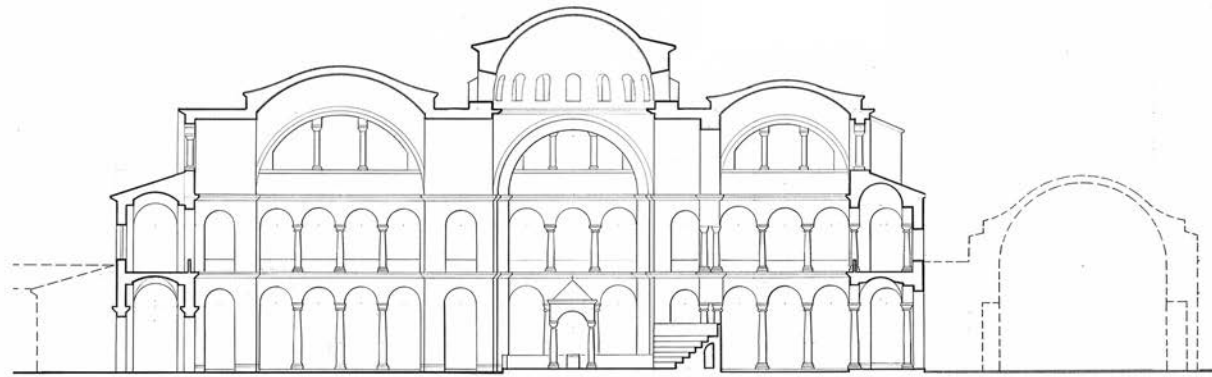
absence of any conclusive evidence for the identification of this structure as the church of the Holy Apostles, these deductions remain speculative. In spite of the above comparisons and site observations, the question regarding the scale of the Holy Apostles remains open.

### Reconstruction

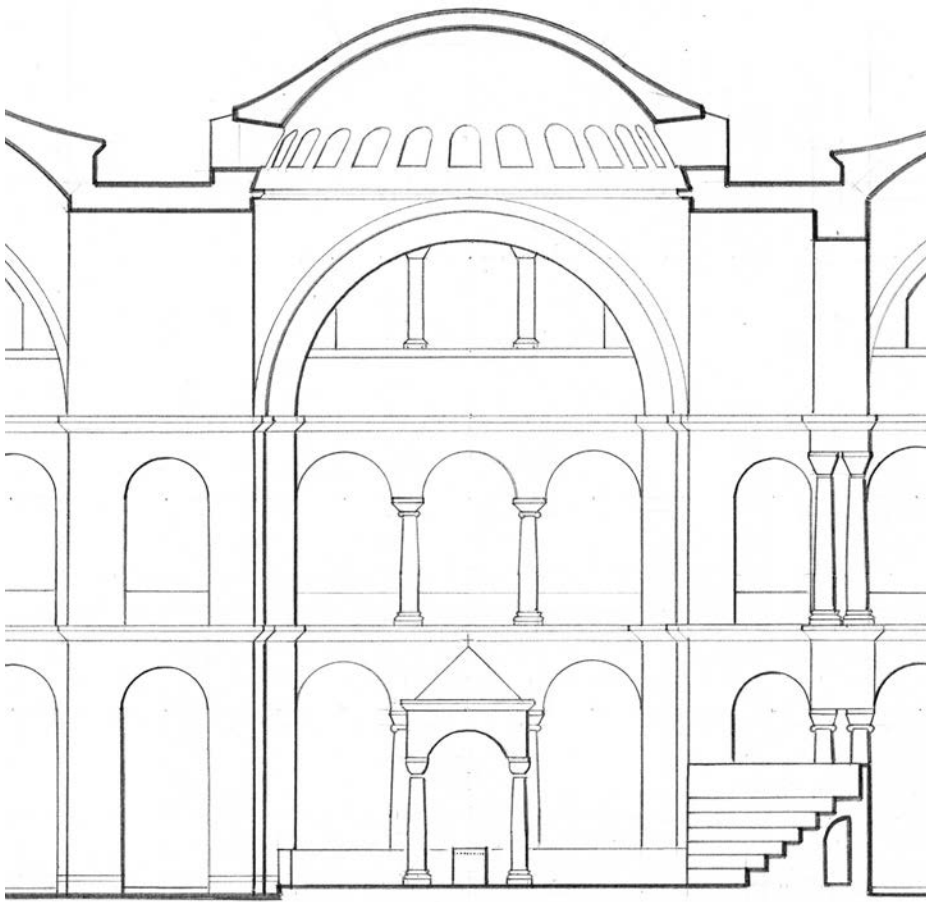
The above discussion completes our exploration of the lost form of Justinian’s Apostoleion. The conclusions presented in the previous

104 See Dark and Özgümüş, *Constantinople*, 106–10.





**FIG. 7.16.** Complex of the Holy Apostles in Constantinople. Alternative Reconstructed Plan and Longitudinal Section. Two alternative themes are explored here: the use of “thermal,” mullioned windows in the clerestory walls and the direct connection between the church and the Mausoleum of Constantine (drawing by author, 2016).



**FIG. 7.17.** Church of the Holy Apostles in Constantinople, reconstructed section of the crossing. Based on the account of Procopius, this alternative reconstruction explores the possibility of a central dome similar to the first dome of Hagia Sophia (drawing by author, 2016).

paragraphs are synthesized in the reconstructed plans and sections of the building, shown in figures 7.15–7.17. These tentative reconstruction drawings represent the church and two of its most important dependencies: the mausoleums of Constantine and Justinian. Here, the Mausoleum of Constantine is shown in the middle of a cloister, as Eusebius described it (fig. 7.15). However, this building could have also been connected with the east cross arm of the church (fig. 7.16). Both the plans and the sections of the mausoleums are shown with dashed lines, which indicate the conjectural character of their reconstruction. The concluding paragraphs of this chapter provide an outline of the reconstructed church, with emphasis on those aspects which appear here for the first time.

According to Procopius, the church had a cruciform plan with an elongated west cross arm. This emphasized the axis that connected the entrance and the sanctuary and provided the church with a sense of direction that is missing

from previous reconstructions. Preceded by a narthex and an atrium, the core of the church was articulated into five square bays. Unlike previous models, which show five equal bays, our analysis raised the possibility of a larger central bay (15 by 15 meters) connected with somewhat smaller bays (12.5 by 12.5 meters) in the north, south, and eastern cross arms. At the four corners of each bay stood large quadripartite piers. The central piers provided a harmonious transition from the large crossing to the smaller bays. This was achieved through projections from the main body of the piers. In the east cross arm, this projection was probably achieved with the double columns mentioned by Constantine the Rhodian. Included for the first time in a reconstruction of the Holy Apostles, these pairs of columns flank the passage from the east cross arm to the crossing. The latter was occupied by the sanctuary, which included a four-column ciborium with a pyramidal roof and a synthronon that resembled the one of St. John in Ephesos.

Analysis of written records and references to affiliated buildings in Ephesos and Venice provided clues for the appearance of the aisles, the galleries, and their colonnades. As we learn from Constantine the Rhodian and Nicholas Mesarites, these formed a continuous circuit of double-storied porticoes, which surrounded the inner bays. These porticoes had two- and three-column arcades inserted between the piers in both levels. The arcades of the gallery were probably surmounted by clerestory walls, which reached the intrados of the broad arches, giving Mesarites the impression that they supported the entire church. The column layout shown in figure 7.15 is the first one—after that published by Soteriou—to agree with both Constantine the Rhodian and Mesarites regarding the number of columns. This shows that it is possible to respect these indications without departing from the design principles of affiliated buildings.

In spite of the extensive references to vaults in the written records, the vaulted pattern of the Holy Apostles remains unclear. If we can say with certainty that spherical vaults covered the five major bays, it is difficult to establish whether these vaults were hemispherical domes on pendentives or pendentive domes (i.e., shallower domes, cospherical with the pendentives). Having analyzed the descriptions of Constantine the Rhodian and Procopius, and investigated the church of St. John in Ephesos, we suggested that a distinctively elevated dome on pendentives covered the central bay, and pendentive domes covered the peripheral bays. Just how “elevated” the central dome was is difficult to establish. Its profile must have been taller than that of the other domes, but not so tall as to become noticeably different from the first dome of Hagia Sophia,

which had a shallow profile. Figures 7.15 and 7.17 explore the form of the two most likely dome profiles. In all these drawings, the reconstruction of the secondary vaults is based on similar specimens in St. John in Ephesos.

The above hypothetical reconstruction raises the possibility that the church of the Holy Apostles had a hybrid architectural character. Combining a processional axis with encircling corridors, this design represented a rare fusion of the types of the basilica and the centralized church. The interior of the church must have been both compartmentalized and cohesive. The space was articulated in bays covered with distinctive vaults. Cut off from each other by transverse arches and piers, these bays must have maintained some degree of independence. Nonetheless, this remained a unified design. The key of this unity lay in the crossing. Its large size, distinctively elevated dome, and luminous character (thanks to the dome’s windows) must have given a special emphasis to the heart of the church. This was not meant to separate this central bay from the neighboring ones but to symbolize its role as the climax of a space that emanates from a center and unfolds in four directions in a fluid movement. This fluidity, combined with the clear hierarchical differentiation between arms and crossing, must have created a complex yet integrative architectural experience. The skillful harmonization of different architectural ideas echoes the multifunctional character of the Holy Apostles. The combination of the roles of church and mausoleum, and the need to accommodate the symbols of religious and political power, inspired the creation of one of the most versatile and sophisticated of early Byzantine churches.