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Streets and Public Spaces in Constantinople

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This paper will mainly address the question of whether Constantinople was planned and built with a regular street layout. The existence of such a layout has frequently been doubted. In fact, the surviving evidence is very scanty. We have only the trace of a single street, the Mese, longer than some hundred meters. Moreover, we should not forget that for a long time scholarship about Byzantine Constantinople was influenced by the appearance of Turkish Istanbul. The Islamic street system, with its irregular blind and winding alleys, was considered to be the symptom of a decadent culture, and since Byzantine culture itself was widely thought to be decadent, the Islamic layout, projected backward in time, served as a proof for the inferiority of Byzantine town planning compared to that of ancient Greece. In *Griechische Städteanlagen*, published in 1924, Armin von Gerkan wrote the famous words:

Constantinople was not a Greek city any more, it ceased to be a Roman one, and did not become a medieval one. It was an accumulation of imperial license without organic development, which was upset more than once by the excessive growth of the population, a pattern without any structure, without roots and without the possibility of inner development. Despite its unique situation in the world, it wasted away because of the basic evil of the Byzantine Empire, it died without ever having lived, and it continued to die on through the Turkish period until the present day.

Von Gerkan ends by declaring Constantinople a “densely settled landscape” rather than a real city.¹

Since most Byzantine street alignments are unknown, the only way to ascertain a possible street system is to check such surviving structures as churches, cisterns, the aqueduct, and city walls. If a number of monuments lie along an imaginary line and are oriented in the same way, a street may have led along them. However, this can serve as a basis for reconstruction only if the monuments are sufficiently distant from each other, since such alignments, where we can still see them, tend to be rather inexact. The churches of Hagia Sophia and Eirene illustrate this difficulty. The old street that was detected in 1935 during excavations in front of Hagia Sophia² runs exactly perpendicular to the main axis of the building. Hagia Eirene, however, is turned a little more to the

Parts of this paper correspond to a more detailed study, “Regionen und Straßen im frühen Konstantinopel,” *IstMitt* 47 (1997): 349–414.

¹A. von Gerkan, *Griechische Städteanlagen* (Berlin-Leipzig, 1924), 168.

²A. M. Schneider, *Die Grabung im Westhof der Sophienkirche zu Istanbul* (Berlin, 1941), 3 f.

south, so that between its narthex and the street a slightly irregular wing had to be inserted to fill the space. If this wing had not been preserved, the difference in orientation, which is only a few degrees, would have distorted our attempt to establish the road path. Nevertheless, by bringing together all available information, it is possible to get a fairly clear image of early Byzantine town planning in Constantinople.

Nine years after the publication of von Gerkan's book, Knut Olof Dalman's study on the Valens Aqueduct, which appeared posthumously in 1933, made some more positive remarks about the street system of Byzantine Constantinople. He wrote: "In the town plan of present-day Constantinople, three zones can still be clearly identified that evidence discernible differences in their street layouts. The first corresponds to the old town within the Severan wall. In it no consistent street network can be recognized. The second zone is Constantine's town, whose systematic layout can still be made clear. . . . In the third zone, which extends to the walls of Theodosius II, we again miss the continuous axes of a uniform system."³ This concept of dividing Constantinople into the old, the Constantinian, and the Theodosian town is a useful base for further investigation. However, in later remarks Dalman was sometimes led astray by the modern street system of Istanbul, which was developing as he was writing, and he was certainly wrong when he assumed that there was no consistent street layout in the old town.⁴

It is clear that when the areas of the Constantinian and Theodosian enlargements were incorporated into the city, a number of overland roads already existed there. The most important of these is the Mese; actually, it formed the eastern end of the old Roman road that extended the Via Egnatia through the Balkan peninsula, ending at the gate of old Byzantium, and was subsequently provided with porticoes on both sides. Another road branched off to the northwest at the place where the Capitol was built under Constantine.⁵ It is usually referred to in modern literature as the northern branch of the Mese, but wrongly, since—as it seems—the name Mese, which means "middle street," was only applied to the part east of the Capitol, where the road actually lay in the middle of the peninsula.⁶

It is also probable that the two coast roads along the shores of the Sea of Marmara and the Golden Horn go back to the time before the refoundation.⁷ These streets will not be treated here, but it should be mentioned that they often crossed the street grids that were established later, following the lines of topography, and that they retained greater importance as continuous axes than any of the newly established roads. All public places of Constantinople outside the old town, for example, were built along the Mese or along the southwestern or northwestern streets.

³K. O. Dalman, *Der Valens-Aquädukt in Konstantinopel* (Bamberg, 1933), 53.

⁴E.g., regarding the hypothesis that the Roman overland road to the northwest followed the modern Şehzadebaşı Caddesi.

⁵See C. Mango, *Le développement urbain de Constantinople (IV^e–VII^e siècles)*, TM, Monographies 2, 2nd ed. (Paris, 1990), plans; A. Berger, *Untersuchungen zu den Patria Konstantinupoleos*, Ποικίλα Βυζαντινά 8 (Bonn, 1988), 330 f.

⁶Cf. Theophanes, *Chronographia*, ed. C. de Boor, 2 vols. (Leipzig, 1883–85; repr. Hildesheim, 1963), 102.9, 369.29, 442.11, and *Chronicon Paschale*, ed. L. Dindorf, CSHB (Bonn, 1832), 1:693.22; *De cerimoniis aulae byzantinae*, ed. J. J. Reiske, CSHB (Bonn, 1829), 439.3 f; see also A. Berger, "Die Senate von Konstantinopel," *Boreas* 18 (1995): 136 n. 35.

⁷Mentioned in Πάτρια Κωνσταντινουπόλεως, 1.68 in *Scriptores originum Constantinopolitanarum*, ed. T. Preger (Leipzig, 1907), 2:148; cf. Berger, *Untersuchungen*, 226 f.

Another problem is posed by the old retaining walls, which divided most slopes into terraces and do not conform to the reconstructed street system as proposed below. Ernest Mamboury and Raymond Janin believed that these walls were mostly of Byzantine origin and that where their construction appeared to be Ottoman, it was the result of later repairs.⁸ Many of these walls are now lost as a result of modern building activity; however, at the only place where major parts do survive, in the area around the former Old Seraglio, it is clear that they belong to its substructures and have no Byzantine predecessors.

Let us now turn to the street layout of Byzantium and early Constantinople. In the old town of Byzantium, a street grid can be recognized quite easily (Fig. 1). It took into account the shape of the major hills in such a way that streets ran either along slopes or perpendicular to them, so that they were either reasonably flat or very steep and equipped with stairs. For this reason, the streets were not always exactly parallel.

Street E ran along the northwest side of the Hippodrome and beside Hagia Sophia and Hagia Eirene to the Acropolis. The exact line of the Acropolis walls is unknown, but it is probable that the walls of the inner courts of the Topkapı Sarayı use them as foundations.⁹ The only gate in these walls that leads to the northeast is the so-called Fil Kapısı, the “Door of the Elephants.” It lies in the line of the supposed Street E and may well have had a predecessor in the Acropolis walls that was used as an exit leading to the Gate of St. Barbara at the Seraglio Point. Street E existed at least until the tenth century¹⁰ and may be the one called Pelargoi, or “the Storks.”¹¹

We can guess from the position and orientation of the palace hall, now the Mosaic Museum,¹² that a parallel street existed some 120 meters to the southeast. This Street F ran along the atrium of the palace hall, then along the east side of Hagia Sophia, ending, perhaps after a small turn to the west, on the Acropolis. It is interesting to note that in the Byzantine period it was impossible to leave the Acropolis by using this street: in 1264, when the patriarch Arsenios was sent into exile, he left the Great Church on the east side, but then apparently used the street called E to reach the Gate of St. Barbara, where he embarked upon the boat that took him to Asia Minor.¹³ The terraces of the old emperor’s palace extended behind Street F to the southeast, and another Street G may be assumed below these terraces leading to the Mangana gate. The hexagonal church wrongly believed to have been that of the Hodegetria¹⁴ did not lie on this street but a little higher on the hill and had a slightly different orientation.

If we now go to the northwest, we find Street D along the west side of the Hippodrome.¹⁵ Since the wall of the Hippodrome turns a little bit to the east shortly before the palace of Antiochos, the street does the same. A curved wall on the right side seen from

⁸R. Janin, *Constantinople byzantine: Développement urbain et répertoire topographique*, 2nd ed. (Paris, 1964), 7 f and enclosure VI.

⁹On the Acropolis in the Byzantine period, see H. Tezcan, *Topkapı Sarayı ve çevresinin Bizans devri arkeolojisi* (Istanbul, 1989).

¹⁰H. Delehay, *Les saints stylites* (Brussels, 1923), 218.

¹¹Janin, *Constantinople*, 405; Berger, *Untersuchungen*, 401 f.

¹²W. Jobst, “Der Kaiserpalast von Konstantinopel und seine Mosaik,” *Antike Welt* 18.3 (1987): 2–22.

¹³George Pachymérès, *Relations historiques*, ed. A. Failler (Paris, 1984), 2:353 f.

¹⁴R. Demangel and E. Mamboury, *Le quartier des Manganes et la première région de Constantinople* (Paris, 1939), 93–111; on the location of Hodegetria, see Berger, *Untersuchungen*, 378.

¹⁵Cf. Berger, *Untersuchungen*, 125, 159; K. Ciggaar, “Une description de Constantinople traduite par un pèlerin anglais,” *REB* 34 (1976): 256 f.

the starting boxes is a standard feature of late Roman hippodromes.¹⁶ The change of direction of Street D has no further implications, because it must have ended at the Mese. However, the orientation of the Basilica and the Chalkoprateia church are known from their existing remains, and some traces of a colonnaded street leading along their west side were actually found in 1929.¹⁷ It seems that the changed direction of Street D was adopted in Street C and in the remaining parallel streets B and A to the northwest. If this is not a simple coincidence, it means that the street layout here is later than the construction of the Hippodrome—and that is hard to believe, even if we accept that the Hippodrome was actually founded by Severus.

The street labeled B on the sketch is interpolated, since no trace of it exists. However, it may have touched the apse of the church whose remains, including some floor mosaics, have been found there.¹⁸ Street A is defined by the corner of a building that was found in 1964 close to the old walls of Byzantium.¹⁹

If we now pass to the streets that ran roughly at right angles to those described above, we see that the corner of the building found in 1964 also establishes the direction of the street labeled 4 on the sketch. Streets 1 to 3, which lie to the north of it, can be traced with some greater certainty. Street 1 still exists in parts, leading through the commercial region of Tahtakale and the southern wing of the Egyptian Bazaar. Its great age is clear from the fact that it runs parallel to Valens' aqueduct and meets the northwestern wall of the Acropolis at a right angle. It also runs along the Balkapan Hanı in Tahtakale, an Ottoman building on an extant Byzantine substructure from the sixth century.²⁰ Street 2 can be fixed by the early Byzantine substructure usually called the palace of Botaneiates,²¹ by the remains of the church with the mosaic floor mentioned above, and by the Chalkoprateia church. It may have turned slightly at its east end in order to conform with streets E, F, and G, and it may have run along the north side of Hagia Sophia. How it ended in the northwest is not clear; at any rate, it did not go beyond the predecessor of Balkapan Hanı after the sixth century, because it would have had to run across the building.

The beginning of Street 3 can be approximately fixed by the southern side of the Balkapan Hanı. It ran straight up to the Basilica, before which it may have turned a little in order to reach the center of the building's west side.

¹⁶My conclusions drawn from this curved wall in "Die Altstadt von Byzanz in der vorjustinianischen Zeit," *Varia 2 = Ποικίλα Βυζαντινά* 6 (Bonn, 1987), 8–10, cannot be sustained, as was pointed out by Mango, *Développement urbain*, 71.

¹⁷M. Schede, "Archäologische Funde," *AA* (1929): 358; A. M. Schneider, *Byzanz* (Berlin, 1936), 92, nos. 8, 9. On the Basilica and the Chalkoprateia church, see T. Mathews, *The Early Churches of Constantinople: Architecture and Liturgy* (University Park, Pa., 1971), 28–33.

¹⁸W. Kleiss, *Topographisch-archäologischer Plan von Istanbul* (Tübingen, 1965), 8, no. 35; R. M. Harrison and G. R. J. Lawson, "The Mosaics in Front of the Vilayet Building in Istanbul," *Istanbul Arkeoloji Müzesi Yıllığı* 13/14 (1967): 216 f; and N. Firatlı, "Recent Important Finds in Istanbul," *ibid.*, 15/16 (1969): 193 f; cf. also G. Hellenkemper-Salies, *RBK* 4:615 f.

¹⁹Kleiss, *Plan*, 12, no. 112; a sketch of the site can be found in the archive of the German Archaeological Institute in Istanbul; see also N. Firatlı, "Brief Archaeological News," *Istanbul Arkeoloji Müzesi Yıllığı* 13/14 (1967): 226 f and pl. 63.

²⁰C. Güren, *Türk Hanlarının Gelişimi ve İstanbul Hanları Mimarisi* (Istanbul, 1985), 85; and A. Berger, "Zur Topographie der Ufergegend am Goldenen Horn in der byzantinischen Zeit," *IstMitt* 45 (1995): 162.

²¹On this, see W. Müller-Wiener, *Bildlexikon zur Topographie Istanbuls* (Tübingen, 1977), 41; Berger, "Ufergegend," 162.

Our greatest problem in reconstructing these three streets is that they appear to radiate from a single point, the so-called *Odun Kapı*, which in Byzantine times was called the Gate of the *Droungarios*.²² Such a radial street design would be quite unusual, unattested elsewhere at that time. The *Odun Kapı* also lies outside of the old walls of Byzantium, and if these streets leading into the old town started from it, a major change in street design must have occurred there after the Constantinian refoundation of the city.

The only major street that does not fit into this more or less rectangular pattern is the main street that led from the western gate to the center of the city, close to the Hippodrome, and that, as our sources claim, already existed before Constantine. Was this street cut at an angle through an existing rectangular grid, or did it survive from an older phase? It is clear that the ancient center of Byzantium lay on the Golden Horn, at the foot of the hills, and that the southern part of the town was not densely settled. In other words, the Hippodrome and the adjoining palace were perhaps established in an area that had previously been more or less empty. The old road to Thrace already ran on top of the hills along the line of the later *Mese*, as we can see from the Roman cemeteries along it. It is obvious that a connecting street from the gate to the old center around the harbor must have existed, and this may well have been Street B posited above. The main square of Byzantium, the so-called *Strategion*, was probably located somewhere at its lower end.²³ When the urban center shifted uphill to the Hippodrome, the *Mese* had to be established. Therefore, the date of this shift depends on the date of the Hippodrome and adjoining constructions. The Hippodrome is usually ascribed to Severus, but his role as builder of Byzantium seems in great part to be legendary.²⁴ We know that the defensive walls were probably not rebuilt before 260 or 270,²⁵ and the construction of the Hippodrome certainly began later, perhaps not much before Constantine's time, when Licinius was master of the city.

The *Augustaion*, a large public square in front of Hagia Sophia, is usually believed to have corresponded to an entire block of the street grid. However, Rudolf Stichel will demonstrate in a forthcoming paper that it was much smaller and comprised only the western half of the block.

Another problem that certainly arose from the shift uphill was lack of a continuous street from the new center to the harbor region. The foundations that have been detected around the Basilica, the *Chalkoprateia* church, and Hagia Sophia were all aligned with these buildings. In order to reach the *Strategion* from Hagia Sophia, the street along the *Chalkoprateia* had to be followed up to the intersection with the former main artery, Street B, where the church with the mosaic was situated.²⁶ When Hagia Sophia was rebuilt and enlarged in Justinian's time, the new atrium was extended over Street E, with the result that all traffic from the harbor to the city center would have had to cross it. It

²²Berger, "Ufergegend," 159.

²³On this, see Janin, *Constantinople*, 13, 431 f; Berger, *Untersuchungen*, 406–11. See also Zosimus, *Nea Historia*, 2.31; Pseudo-Hesychius in *Scriptores originum Constantinopolitanarum*, ed. T. Preger (Leipzig, 1901), 1.16.

²⁴G. Dagron, *Naissance d'une capitale* (Paris, 1974), 15 f; Mango, *Développement urbain*, 19.

²⁵Mango, *Développement urbain*, 15. The historian Herodianus seems to have seen the city in a ruinous state around 240 (*Historia* 3.1.7).

²⁶It may be identified with the Church of the Mother of God of Urbicius, on which see R. Janin, *La géographie ecclésiastique de l'Empire byzantin*, vol. 1, *Le siège de Constantinople et le patriarcat œcuménique*, pt. 3, *Les églises et les monastères*, 2nd ed. (Paris, 1969), 207; Berger, *Untersuchungen*, 404 f.

seems that to avoid this, a new street was later inserted into the system, leading from a point below the Chalkoprataia church directly to the Milion.²⁷

When the Mese was built, some adjoining areas were apparently restructured. The upper end of the old main street B was abandoned, and another street, labeled H, was introduced. Its alignment can be determined from three cisterns in this area: the cistern called Binbirdirek south of the Mese,²⁸ the Şerefiye cistern under the current town hall of Eminönü, and finally the great cistern to the north of the Mese, of which little has remained.²⁹

Let us summarize what we have learned so far about old Byzantium. After the foundation of Constantinople in 324, a vast area had to be built up and incorporated into the fabric of the city. It seems that a consistent plan for the whole town was not made immediately but that as a first stage only two new, separate quarters were established, one on the hills overlooking the Golden Horn, just outside the old walls, the other around the mausoleum of Constantine at the church of the Holy Apostles.

Of the first of these areas, the western part was incorporated into the Old Serail shortly after the Ottoman conquest, whereas the eastern part was nearly completely covered with the constructions of the Great Bazaar. The only surviving Byzantine monument here is the so-called Tower of Eirene, a building of middle Byzantine date.³⁰ It is oriented exactly north-south and not to the northeast, as we would expect if the street system of the old town had been extended into this area. The same is apparently true for a number of cisterns in the vicinity that were published by Josef Strzygowski in 1893 but that can no longer be found today.³¹ In this region a street named Uzunçarşı, literally “Long Market,” preserves the location and name of a famous colonnaded street of the Byzantine era, the Makros Embolos, or Long Portico. This street, too, runs from south to north at a right angle to the Mese and turns slightly east at its lower end.³²

Another street running south-north can be found at the eastern end of the aqueduct. It certainly still follows the same line it had in the early Byzantine period, since on its west side a group of churches was found. One of them has recently been identified with the church of the Mother of God of the Diaconissa, inaugurated in 596.³³ The church was separated from the street by a courtyard and retaining wall.

²⁷A possible reference to it can be found in the *Miracles of St. Photeine*, see F. Halkin, ed., *Hagiographica inedita decem* (Turnhout-Leuven, 1989), 117 f; A.-M. Talbot, “The Posthumous Miracles of St. Photeine,” *AB* 112 (1994): 93 f. The approximate course of this street is shown on Fig. 1 with dotted lines.

²⁸It is usually but wrongly identified with the cistern of Philoxenos, on which cf. J. Bardill, “The Palace of Lausus and Nearby Monuments in Constantinople,” *AJA* 101 (1997): 69–83. It may have belonged to the palace of Illus that lay close to the Hippodrome and the palace of Antiochus; on the church at this palace, Janin, *Églises*, 416; Berger, *Untersuchungen*, 560–62; on the cistern, P. Forchheimer and J. Strzygowski, *Die byzantinischen Wasserbehälter von Konstantinopel* (Vienna, 1893), 180 f.

²⁹This was probably the real Philoxenos cistern, since it was closely connected to the palace of Lausus, which has to be sought here rather than on the south side of the Mese, cf. Bardill, “Palace of Lausus,” 83–89.

³⁰Cf. Berger, “Ufergegend,” 158.

³¹Cf. Forchheimer and Strzygowski, *Wasserbehälter*, nos. 21, 25, 30, 37.

³²The Makros Embolos began at the Bronze Tetrastylon, see Berger, *Untersuchungen*, 315, and ended at the Zindan Kapı, which is sometimes called the gate of St. Anastasia, see A. M. Schneider, “Mauern und Tore am Goldenen Horn zu Konstantinopel,” *Nachrichten der Akademie der Wissenschaften in Göttingen, philosophisch-historische Klasse* 5 (1950): 86 n. 53; cf. Berger, *Untersuchungen*, 446.

³³N. Firatlı, “Découverte de trois églises byzantines à Istanbul,” *CahArch* 5 (1951): 163–78. On the identity with the Diaconissa church, cf. J. Bardill, “A Catalogue of Stamped Bricks in the Ayasofya Collection,” *Anatolian Archaeology: Reports on Research Conducted in Turkey* 1 (1995): 28 f.

A former inhabitant of the area told me that around 1950, when he was still a boy, he and some friends found a tunnel that led to the north from the Sekbanbaşı Yakup Ağa Camii. This small mosque lies just on the south side of the Mese, opposite the point where the old street began, and we can assume that this tunnel was an old waste-water channel.

My informant told me that he entered the tunnel and left it again somewhere in the vicinity of the Süleymaniye mosque. Unfortunately the place where the tunnel began is now covered with new constructions, so there is no possibility of checking the story. We know that the old Ottoman palace, in its first stage, comprised a vast area from the Makros Embolos in the east to the street at the Diaconissa church in the west and from the Mese in the south up to the beginning of the steep slope behind the mosque of Süleyman in the north.³⁴ This area was subsequently reduced; the southern part was detached already in the time of Mehmet the Conqueror's son Bayezid and served as a building ground for his mosque, medrese, and bath; later, the mosque of Süleyman the Great was built in the northern part. There is reason to believe that the eastern and western boundaries simply followed old streets that had existed there since the early Byzantine period. Because the distance between the old walls of Byzantium and the Makros Embolos is about two-thirds that between the Makros Embolos and the Diaconissa street, we can assume that, in the first phase of expansion beyond the old walls, five parallel streets were built in this part of the city, separated from each other by about 180 meters.

The quarter outside the old walls later belonged to Regions VI and VII, and it seems that the parallel streets are mentioned where Region VII is described in the *Notitia urbis Constantinopolitanae*: "Compared to the one before, the seventh region is flatter, although it must be considered too as declining to the sea at the end of its one side [that is to the north]. It extends from the right side of the Column of Constantine up to the Forum of Theodosius with continuous porticoes, and with other parallel streets it declines at one side to the sea and is thus leading down."³⁵

There is no evidence that the parallel streets of this first expansion phase went so far to the north that they reached the Golden Horn. The reason may be that the shore was perhaps already settled before Constantine included it inside the city walls, and new street planning could not be applied there. In the western part, moreover, a sharp descent between the new quarter on the hilltop and the older one on the shore made the building of continuous streets a difficult task.

Since the last century, the former extent of the Forum of Theodosius, the so-called Taurus, has often been equated with the whole area of the old Ottoman Serail. But such a forum, measuring 300 by 450 meters and possibly with a vast exedra on the northern side, would have been out of proportion. Among other difficulties, it could not even have had a completely level surface. The estimation can hardly be correct. According to the *Notitia* Region VII, approximately two-thirds of which would be covered by so-large a forum, was actually the most densely settled region in Constantinople, containing 711 houses. Over the years, the supposed size of the forum has gradually been reduced,

³⁴E. Çelebi, *Seyahatnamesi*, ed. R. E. Koçu (Istanbul, 1955), 28 f; see most recently A. Berger, "Zur sogenannten Stadtansicht des Vavassore," *IstMitt* 44 (1994): 342 f.

³⁵*Notitia urbis Constantinopolitanae*, in *Notitia dignitatum*, ed. O. Seeck (Berlin, 1876), 235.

reaching about 120 by 100 meters in Cyril Mango's most recent publications.³⁶ But the reality, I think, is different still. The only surviving part of the forum is the magnificent Arch of Theodosius, which is usually believed to have been the forum's western entrance.³⁷ Close to this arch a number of foundation walls have been found that prove that it did not form the western, but rather the eastern entrance of an area 55 by 55 meters, with an exedra to the north. Thus, the Taurus was so much smaller than had been estimated that even the excavators did not realize they had actually found it.³⁸

The Taurus is the only public space of Constantinople of which material remains exist. I suggest that there are good reasons to reduce proportionally all other fora as well. The fora of Constantine and Arcadius both lay on the edge of a sharp slope to the south, and if we accept that the monumental columns that still exist, whole or in part, were located in the middle of the squares, the size of these fora cannot have exceeded that of the Forum of Theodosius. The small size of fora in Constantinople may be explained by their having had only a ceremonial function, since their political role had been taken over by the Hippodrome.

A second area in Constantine's new town where the layout of streets must go back to the first years after the refoundation is that around the church of the Holy Apostles. Unfortunately, there are no remains of the first church or of its sixth-century successor that would allow us to define its exact location and orientation. However, a look at the aqueduct may be helpful in this regard. Today it is usually called the Aqueduct of Valens, since it was finished in 368, during Valens's reign, but there is reason to assume that it was already planned and begun in Constantine's time.³⁹ As mentioned above, the aqueduct runs parallel to one of the streets in the old part of Byzantium. Also, its southeastern prolongation would exactly meet the main entrance of the courtyard in the Great Palace that is now the Mosaic Museum. It is obvious that the aqueduct was planned in a clear relationship to the street system of the old town of Byzantium.

Arches 26/27 and 52 are wider than the others in the aqueduct and were certainly intended to serve as passages for streets.⁴⁰ At other points where we would expect similar wider arches, the original construction is lost, for example, at the northwestern end close to the church of the Holy Apostles, where the aqueduct was completely rebuilt in Ottoman times.

Another piece of evidence is provided by the old overland road to the northwest. If we assume that it branched off from the Mese at the Capitol, then passed along the Aetios cistern in the Theodosian part of the city and met the walls at the Gate of Charisios, the modern Edirne Kapı, it must have followed a straight course that was parallel not to the aqueduct but rather to the large court of the Fatih mosque, which replaced the church of the Holy Apostles in the Ottoman period.⁴¹

In attempting to reconstruct the Byzantine streets in this area, we therefore have two

³⁶Mango, *Développement urbain*, plans.

³⁷A reconstruction by R. Naumann, "Neue Beobachtungen am Theodosiosbogen und Forum Tauri in Istanbul," *IstMitt* 26 (1976): 117–41.

³⁸See A. Berger, "Tauros e Sigma: Due piazze di Constantinopoli," in *Bisanzio e l'Occidente: arte, archeologia, storia. Studi in onore di Fernanda de'Maffei* (Rome, 1996), 19–24.

³⁹Mango, *Développement urbain*, 20.

⁴⁰Dalman, *Valens-Aquädukt*, 45.

⁴¹See Berger, *Untersuchungen*, 330 f.

different options. The first is to assume that the Fatih mosque stands on the foundations of the church of the Holy Apostles and was oriented along the northwestern street (Fig. 2). The streets through the aqueduct would then have crossed at an oblique angle.⁴² This reconstruction, with parallel streets perpendicular to the old overland road is, however, contraindicated by the orientation of the few Byzantine remains that still exist there. One of these is a strong foundation wall south of the aqueduct and parallel to it, found in 1964 when an underground pedestrian passage way was built.⁴³ Also, we know of four cisterns in this area. One is of early Byzantine date and lies under the courtyard of the Fatih mosque,⁴⁴ the other three are middle Byzantine and incorporate two substructures of churches now lost.⁴⁵ All are oriented more or less parallel to the aqueduct. It seems reasonable, therefore, to abandon the traditional idea that the Fatih mosque replaced the church of the Holy Apostles on the same spot. This hypothesis was introduced by Karl Wulzinger in 1932 and demonstrated in a quite convincing way,⁴⁶ but there are a number of objections to it. For example, if the mosque had replaced the church exactly, the grave of Sultan Mehmet would have taken the place of Constantine's mausoleum. This would have been an act of enormous symbolic meaning, but is impossible, since the mausoleum must have been considerably larger than Mehmet's grave and would have interrupted the church's eastern cross arm. The probable size of Constantine's mausoleum can be deduced from such similar surviving fourth-century structures as St. Costanza in Rome or the Holy Sepulcher rotunda in Jerusalem. It has also been assumed that the mosque's courtyard was Byzantine,⁴⁷ but we know that the atrium of the church of the Holy Apostles was not that large. We should accept, therefore, that what has been assumed as the physical and ideological replacement of the church of the Holy Apostles by the Fatih mosque is a modern projection backward in time. The church of the Holy Apostles was razed by the Ottomans and no part of it reused. We should reconstruct the church as being oriented in the same direction as the aqueduct, positioning it closer to the aqueduct than to the present building.⁴⁸ In fact, the church was located by a sixteenth-century source at the İmaret of the Fatih mosque.⁴⁹

This reconstruction yields our second option for the street layout (Fig. 3), in which only the preexisting overland road does not fit into the rectangular scheme. In the grid as shown here, the foundation wall lies along a street, the aqueduct lies in the middle of a number of *insulae* between the front and back lots, and the cisterns fit into the system

⁴²The only reconstruction published until now, that of M. Restle, *Reclams Kunstführer Istanbul* (Stuttgart, 1976), 256, in reality reproduces the course of the present streets, which were built in the 20th century.

⁴³Unpublished report by W. Kleiss, archive of the German Archaeological Institute Istanbul. Restle's reconstruction ignores both cisterns and the wall.

⁴⁴B. Kunter and S. Ülgen, *Fatih Camii ve Bizans Sarnıcı* (Istanbul, 1939), 16, fig. 16, 71 f.

⁴⁵Forchheimer and Strzygowski, *Wasserbehälter*, 69, 81; and W. Müller-Wiener, "Zur Lage der Allerheiligenkirche in Konstantinopel," in *Lebendige Altertumswissenschaft. Festschrift H. Vettors* (Baden bei Wien, 1985), 333–35. The first church substructure may have been that of the church of the monastery of Christ Philanthropos; cf. A. Berger, "Die mittelbyzantinische Kirche bei der Mehmet Fatih Camii in Istanbul," *IstMitt* 47 (1997): 455–60, the second one that of the church of Theophano; on this church, Janin, *Églises*, 245, 389 f; Berger, *Untersuchungen*, 499–501.

⁴⁶K. Wulzinger, "Die Apostelkirche und die Mehmedije zu Konstantinopel," *Byzantion* 7 (1932): 1–39.

⁴⁷M. Restle, *Kunstführer*, 256.

⁴⁸As shown by Müller and Wiener, *Bildlexikon*, 21, 25, 27; Berger, *Untersuchungen*, 520.

⁴⁹Mango, *Développement urbain*, 27 n. 27.

quite logically. Nonetheless, it must be admitted that the position and groundplan of the church of the Holy Apostles proposed here is pure conjecture. Since the streets of the old town of Byzantium and those around the church of the Holy Apostles follow the same orientation, at some point a regular street system for all Constantinople might have been taken into consideration, but the north-south alignment of the streets in the area of the present bazaar shows that these plans were never actually executed.

Moreover, if this street grid around the church of the Holy Apostles did ever exist, it was probably abandoned only a short time later. It is true that the major streets through the aqueduct crossed it at regular intervals for a long time, until the twentieth century, in fact, when the streets of Istanbul had to be adapted for automobile traffic.⁵⁰ These streets, however, did not use the broader arches mentioned above (except in the case of arch 52, which may be coincidence). It may seem surprising that the city streets changed course completely, while the aqueduct passages remained in place. This can be explained by the fact that most parts of the aqueduct were not accessible, but were covered by houses and even churches attached to it. For example, the north church of Kalenderhane, already in the late sixth century used some arches of the aqueduct as its northern nave.⁵¹

If we assume that the streets through the aqueduct passages ran in a direction deviating 30 degrees from north (Fig. 4), two of them would meet gates of the sea wall on the Golden Horn, the Cibâli Kapı and the Unkapanı Kapı, respectively.⁵² The streets would also touch a number of early and middle Byzantine monuments and buildings in this region, among them the Column of Marcian, the monasteries of Christ Pantepoptes and Pantokrator, and the church of St. Polyeuktos. The annexed baptistery of this church even had an oblique western wall along one of the streets.⁵³ Further to the east, another street runs alongside a modern Greek chapel and the now-disappeared, so-called grave of the last emperor Constantine⁵⁴—both structures that probably replace Byzantine churches.⁵⁵ Another street would lead exactly to the southern entrance of the Vefa Kilise Camii, the former church of St. Procopius.⁵⁶ There is, however, no indication that this street system was extended further to the east, where the first street-grid of Constantinople already existed.

The fact that the streets lead to gates of the sea walls gives us a *terminus ante quem* for this phase, namely the construction of these walls in 438/439.⁵⁷ Now, let us assume

⁵⁰Cf. the map from 1882: *19. Asırda İstanbul Haritası*, ed. E. H. Ayverdi (Istanbul, 1958), sheet C4.

⁵¹Cf. "North Church," in *Kalenderhane in Istanbul*, ed. C. L. Striker and Y. D. Kuban (Mainz, 1997), 37–45.

⁵²On these see Schneider, "Mauern," 77; he identifies the Cibâli Kapı with the *porta Putea* or *porta al Pozzo* mentioned by Italian sources, but this was probably the Ayakapı, see Berger, "Ufergegend," 152. As the Byzantine names of most gates of the sea walls are not known with certainty, the Turkish names will be used here; see Schneider, "Mauern," 65–107, and Berger, "Ufergegend," 149–65.

⁵³R. M. Harrison, *Excavations at Saraçhane in Istanbul* (Princeton–Washington, D.C., 1986), 1:16, 24.

⁵⁴On this see D. M. Nicol, *The Immortal Emperor: The Life and Legend of Constantine Palaiologos, Last Emperor of the Romans* (Cambridge, 1992), 92 f. The grave was not venerated before the 19th century and disappeared around 1960, when a new street layout was introduced.

⁵⁵A safe identification seems impossible. Perhaps the church of St. Stephanus of the Konstantianai lay at one of these two places. This church still existed in 1453; see Janin, *Églises*, 474 f; Berger, *Untersuchungen*, 471 f.

⁵⁶Berger, *Untersuchungen*, 463.

⁵⁷*Chron. Pasch.*, ed. Dindorf, 583.3 f. Whereas the sea walls around the old town of Byzantium were built in the Roman era (cf. C. Barsanti, "Note archeologiche su Bisanzio romana," *Milione* 2 [1990]: 14 f), there is

that the same street system also existed on the southern side of the city facing the Sea of Marmara. We see that streets would lead to all five gates in the sea walls in the area of the Constantinian town. These are, however, not prolongations of the streets reconstructed in the northern part of the city but lay between them. This is quite logical, because the distance between the reconstructed northern streets is about 220 meters, far too great for a reasonable sized *insulae*, such as we know from other late antique towns.⁵⁸ So, the distance between the parallel streets in this part of Constantinople was actually about 110 meters. In Figure 4, for the sake of clarity, not all of them are indicated.

Of the gates in the Marmara sea walls only the Kumkapı, the Iron Gate of the Byzantines, is known by its old name.⁵⁹ The position of three other gates can be deduced with reasonable certainty from old maps. The first gate west of Kumkapı is almost completely invisible today and unknown in the scholarly literature, since its outer face is hidden behind a new Ottoman revetment, and the street level has risen so high that inside only the top of the supporting arch over it can be seen.⁶⁰ The gate must have been that close to *ta Kanikleiou*, from which the street went up to the church of Homonoia/Panteleemon, mentioned by the *Book of Ceremonies* in the tenth century.⁶¹

The street system cannot be reconstructed completely, because there exist no traces of streets at right angles to those shown here. These would be necessary to form the usual *insulae*, that is, the normal blocks of eight rectangular lots arranged in two rows of four. The orientation deviating 30 degrees from north supports R. Brun's theory that many monuments in Constantinople were arranged according to a pattern of large triangles, imitating an older similar pattern in Rome.⁶² In fact, our reconstructed streets in the area of the Constantinian town coincide with or run parallel to one side of Brun's central triangle.

Between 408 and 413, the Theodosian wall was added further to the west. Properly speaking, the newly acquired area was not considered part of the town. It was not densely settled, but contained monasteries, gardens, fields, and cemeteries.⁶³ The position of the

no indication that the Constantinian town possessed sea walls before 438/39, as has been assumed, e.g., by Schneider, "Mauern," 65.

⁵⁸ See A. Bryer and H. Lowry, *Continuity and Change in Late Byzantine and Early Ottoman Society* (Birmingham, 1986), 264. The *insulae* of Antioch had a size of 112 × 58 m, in Beroia of 124 × 48 m, in Dura of 70 × 35 m, in Damascus of 100 × 45 m, in Nikaia of 100 × 50 m, in Sinope of 100 × 60 m, in Thessalonike of 100 × 50 m, and in Trebizond of 100 × 60 m. Cf. also W. Hoepfner, "Von Alexandria über Pergamon nach Nikopolis," in *Akten des XIII. internationalen Kongresses für klassische Archäologie Berlin 1988* (Berlin, 1990), 279 f.

⁵⁹ See A. van Millingen, *Byzantine Constantinople* (London, 1899), 248 f; F. Dirimtekin, *Fetihden önce Marmara surları* (Istanbul, 1953), 32 f.

⁶⁰ It lies opposite the house at Alişan Sokağı no. 121.

⁶¹ *De cerim.*, ed. Reiske, 561.3; on *ta Kanikleiou*, see Janin, *Constantinople*, 365 f; Berger, *Untersuchungen*, 645 f.

⁶² R. Brun, "An Urban Design Imported from Rome to Constantinople—New Rome," in *Bysans och Norden, akta för nordiska forskarkursen i bysantinsk konstvetenskap 1986* (Stockholm, 1989): 213 f; idem, "A System of City Design in the Ancient World Based on Equilateral Triangles," in *International Congress for the History of Art Washington 1986, World Art: Themes of Unity in Diversity*, ed. I. Lavin (University Park, Pa., 1989), 199 f; and elsewhere.

⁶³ In the early period, the most prominent buildings there were the Palace of Helena and the villas of Saturninus and Aurelianus, cf. Janin, *Constantinople*, 317, 355, 422; V. Tiftixoglu, "Die Helenianai nebst einigen anderen Besitzungen im Vorfeld des frühen Konstantinopel," in *Studien zur Frühgeschichte Konstantinopels*, ed. H.-G. Beck (Munich, 1973), 79–83; Berger, *Untersuchungen*, 362, 605 f, 629–31. On the mosaic in Pulcu Sokağı that was found in 1994 and may have belonged to a pre-Constantinian villa, see the unpublished symposium paper of Alessandra Ricci.

gates in the sea walls on both the Sea of Marmara and the Golden Horn suggest that perhaps there were plans to extend the street system into this area but that this did not take place except close to the seashore.

The urban development of Constantinople was always closely connected to the political strength of the whole empire. So it is clear that possible plans for expansion became unrealistic after the time of Justinian. Constantinople was besieged by the Avars, Slavs, and Arabs in the seventh century: it lost most of its population, and the remaining inhabitants led a rather rural life within walls that encompassed too large an area.⁶⁴ At this time, Constantinople may really have become the “densely settled landscape” that von Gerkan claimed it had been already during its peak prosperity.

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⁶⁴Mango, *Développement urbain*, 53–60.