

An interdisciplinary experiment for the urban morphology of Galata (Istanbul) and its surroundings during the Late Antiquity and Middle Ages

Hasan Sercan SAĞLAM

saglam.h.sercan@gmail.com • Research Center for Anatolian Civilizations (ANAMED), Koç University, Istanbul, Turkey

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Abstract

During its Byzantine times, Galata was the 13th region of Constantinople, once the illustrious imperial capital now called Istanbul. This part of modern Beyoğlu especially came to the forefront with its prosperous Genoese period, which lasted between 1267-1453. Although Galata had a significant urban and architectural development during that period, there are solid evidence and recent discoveries regarding the phenomenon of spatial continuity. In this regard, it was seen that the Genoese did not found Galata as a colonial settlement from scratch but in fact possessed a well urbanized Byzantine district. In order to display the urban layout of its previous centuries, Galata was formerly subjected to some mapping attempts but few of them were able to accurately detect spatial continuities as well as discontinuities between different historical periods of this neighborhood. Hence, those efforts remained rather inconclusive from an urban point of view. Main reasons behind this failure can be given as the lack of an interdisciplinary approach and proper knowledge of urban morphology. Therefore, this article aims to improve the aforementioned research within the context of discovering the ancient road and water system; and to set a wider spatial connection between the late antiquity and medieval periods of Galata in comparison with modern times. For this reason, primary sources and archaeological evidence were considered for exclusive urban objectives. In the end, related findings displayed that the urban layout of modern Galata and its surroundings not only have strong traces remained from ancient times but also had significant transformations.

Keywords

Galata, Architectural history, Urban archaeology, Urban history, Urban morphology.

1. Galata in Ancient Times: Sykai and its surroundings until the Genoese Period

Galata is a northern district of Istanbul, which is located outside the historical peninsula and on the other side of the Golden Horn. As a result of its coastal access to this gulf as well as the Bosphorus, Galata has many natural quays. Following an almost plain coastal band all along the localities of Azapkapı, Karaköy and Tophane, the topography rises until reaching a midway hilltop called Kuledibi. After this location, the topography rises further to the north, until Şişhane. Due to its dominant position, Galata offers a clear view of the Golden Horn, Bosphorus and Istanbul.

Narratives about the rich natural and built environment of the place now called Galata date back to ancient times. It was formerly called “Sykai” that named after figs. According to Dionysius of Byzantium (2010), Sykai appears as a mere uninhabited place as of the late 2nd century and the oldest settlement of that area was located around modern Tophane, opposite the ancient Byzantium.

The *Notitia Urbis Constantinopolitanae* indicates as of the 5th century that Sykai, the 13th region of Constantinople was separated by a narrow bay of the sea, therefore reached from the city through regular ferries. It was completely situated on the side of a mountain other than the course of a main street at the sea level, lying along the foot of that mountain. A landing stage for Sykai was in the 6th region right across (modern Eminönü). It had one church; the Baths of Honorius; the Forum of Honorius; a theatre; a dockyard; 431 houses; a large portico; five private baths; one public bakery; four private bakeries; and eight bread distribution centers (Matthews, 2012).

When Theodoric, the king of Ostrogoths had mutinied with his army against Zeno in 487, he occupied Thrace until Melantias and also Sykai opposite of Constantinople, and cut off the city’s aqueduct (Malalas, 1986; Marcellinus Comes, 2017). In 528, Justinian I restored the ruined Sykai as well as its theatre and walls. He also built a bridge to go across from Constantino-

ple and accorded the right of being a separate city to this suburb, which was renamed as “Justinianopolis” (Malalas, 1986; *Chronicon Paschale*, 1989). Afterwards, in 552, he constructed the monumental church of Hagia Irene there (Malalas, 1986; Procopius, 1999).

Elaia (or Elaion) was a sacred and mountainous suburb on the opposite side of Constantinople, which first appears in the 5th century. The church and leprosarium of Saint Zotikos was located there, who lived in the 4th century (Janin, 1969; Mango, 2009). According to Anthony of Novgorod, who visited Constantinople in 1200, the aforementioned complex remained on a hilltop from Pegai (modern Kasımpaşa) (Janin, 1950).

The Church of the Maccabees was another earlier shrine of Sykai from the 4th century but its location was also mentioned as Elaia, as it remained slightly inland from Argyroupolis (modern Tophane) (Mango, 2009). Therefore, the position of Elaia was interpreted as the commanding heights rising above the neighboring Kasımpaşa, Galata and Tophane, like a conical hilltop (Dalleggio d’Alessio, 1946; Janin, 1950; Mango, 2009). The *Patria* of Constantinople indicates that the leprosarium of Saint Zotikos was rebuilt by Justin II and Sophia during the 6th century (Berger, 2013). Elaia that was named after olives was last seen in a 10th century Byzantine liturgical compilation published by Delehaye (1902).

Afterwards, the location of the aforementioned leprosarium appears as “Herion” in the 11th century, within the context of a Slavic attack in 596. Accordingly, it was soon restored by Emperor Maurice that a second restoration was carried out by John I Tzimiskes in the 10th century (Janin, 1969). As of the late 10th century, Hierion (also called Herion / Gerion) was mentioned as a burial place on the other side of Constantinople by the *Patria*. It was allegedly named after a priest (ιερεύς) called Iros’ statue, which was erected there; and also after the word “tomb” (ἡρώον) (Berger, 2013; Kimmelfield, 2019). Moreover, “Gerion” was defined as a place right above Galata in a Byzantine patriarchal

document from September 1400 (Janin, 1950). Thus, it was argued by Dalleggio d'Alessio (1946) and Janin (1950) that all those names actually indicated the same place in different times, above Galata.

It is known that Sykai itself was also used as a burial place. For instance, during the disastrous Plague of Justinian in 541-542, burial plots in Constantinople were not enough for the victims. Hence, the towers of Sykai walls were unroofed, entirely filled with corpses and roofed again (Procopius, 2007). Nevertheless, it appears that the walls of Sykai were soon restored to their previous state, as Agathias (1975) indicates that they were manned against Kutrigur raids in 558-559.

"Exartysis" was the site of arming warships and it was placed opposite of Constantinople as of the mid-10th century (Janin, 1950). Then, an "Old Exartysis" was mentioned in the vicinity of Pegai in 1265. As a result, the dockyard of Sykai from the 5th century *Notitia*, the Exartysis, "vetus Tarsana" (old dockyard) in the west of Galata by May 1303 (discussed in the next section) and recent Haliç Shipyards were all matched with each other by position by Erkal (2016) and Janin (1950).

Especially from the mid-5th century onwards, numerous shrines of Constantinople briefly appeared in historical accounts and with the distinctive statement of "peran" (πέραν = across) for Sykai, Elaia, Argyroupolis and Exartysis, which were all located on the other side of the Golden Horn (Delehay, 1902; Janin, 1969). Sykai had seven churches and nine monasteries in total as of the 6th century (Janin, 1969).

The exact etymological root of "Galata" is unclear but there are some hypotheses about this subject (Eyice, 1965). It first appeared in the 8th century and after a castle as "kastelliou ton Galaton" during the Siege of Constantinople (717-718) by Arabs. A chain was extended from that fortress to Seraglio Point in order to blockade the Golden Horn (Theophanes the Confessor, 1997). The remained cellar of this fortress now functions as Yeraltı Mosque (Erkal, 2011). The name "Sykai" last appears in the 10th century compilation of Delehay (1902). It was eventually replaced by "Galata".

The Middle Byzantine period was relatively devastating for the area due to the Battle of Pegai against Bulgarians in 921 (Hupchick, 2017) and the revolt of Nicephorus Bryennius in 1077, which caused a fire that burned all the northern suburbs of Constantinople, opposite the Golden Horn (Kohen, 2007). There are very few primary sources giving information about this period of Galata and its surroundings.

As of the second half of the 12th century, a Jewish quarter in Galata was mentioned by Benjamin of Tudela. It had a community of 2000 Rabbinic and 500 Karaite Jews, where a fence divided them (Jacoby, 1967). During the Fourth Crusade, the Castle of Galata and its naval chain were captured by the Crusaders in July 1203. The Jewish quarter there was sacked and burned. Then, the troops encamped beyond the Golden Horn for a while, before the final siege and sack of Constantinople in April 1204 (Geoffroy de Villehardouin, 2017). In this regard, it has been argued that Galata faced an overall abandonment and neglect during the struggling Latin period in Constantinople, which lasted until 1261 (Jacoby, 1998; 2013).

The foundation process of Sykai in coordination with Constantinople on the other side was discussed by Camiz (2019) that both settlements gradually expanded from the east towards the west during the Early Byzantine period. When the ancient Byzantium grew until the boundary where the Walls of Constantinople are situated, in the meantime, the oldest settlement around modern Tophane then formed Sykai in the west and later continued its growth towards modern Kasımpaşa.

2. Pera on top of Galata: Edicts of May 1303 and March 1304

An alliance was made between Genoese and Byzantines in 1261 against the Latin Empire and the city was recovered in the same year. Later on, Galata was ceded to Genoese in 1267 (Müller-Wiener, 2001). Its fortifications except for the castle were demolished by Michael VIII as a precaution prior the arrival of the Genoese that Galata was officially called "Pera" by them. In July 1296, the colony was devastated by the archrival Venetians (Ey-

ice, 1967; Müller-Wiener, 2001).

The imperial edict of Andronikos II dated May 1303 is an important document due to its contents about precise borders of Pera, which also included metric data and some reference places. It is absolutely necessary to well apply them onto present topography of Galata in order to display the precise urban layout at that time, which naturally had a direct connection with the surrounding area through the supposed main arteries that modern Perşembe Pazarı Street was most probably one of them. The other ones were discussed in following chapters.

Accordingly, and in short, the borderline started in the west, before the landing stage called “vetus Tarsana” (old dockyard). It then climbed north-east and reached the vineyard of Perdikares. Afterwards, it turned east and continued straight towards this direction, which passed through the church of Hagios Theodoros, another vineyard called “Macropita” (belonging to Lips Monastery), the church of Hagia Irene, and two adjacent vineyards of Military Logothete Kinnamos (a Byzantine state official), respectively. In front of the gate of Hagios Georgios (today Sankt Georg), the borderline then made a characteristic double zigzag movement towards the south and east, where the churches of Hagioi Anargyroi and Hagios Nikolaos were bypassed, respectively. It continued towards the east and turned south for a final time and reached the shore, before the Castle of Galata (today Yeraltı Mosque). Finally, it followed the coastline and reached the start point in the west. A buffer zone with a certain depth was to be left unoccupied around the quarter (Fig. 1) (Belgrano, 1877; Sauli, 1831).

The detailed study of Palazzo (1946) in order to apply the aforementioned description on modern Galata achieved partial success and the position of Hagia Irene was well matched with Arap Mosque, known as San Domenico during the Genoese period. However, that characteristic zigzag movement in order to bypass two Byzantine churches was applied with a highly hypothetical manner, as if resembling a map projection error. This mistake was also continued by Balard (1978); causing a situation as if the medieval urban layout was considerably different than present one.

It is known that Yeni Mosque in Galata was built in the late 17th century on a plot formerly occupied by a Franciscan convent with the churches of Sant’Anna and San Francesco from the Genoese period. This area is now a hardware bazaar called Hırdavatçılar Çarşısı (Özgüleş, 2017). Although detailed 17th century site plans of the former convent with two churches were published by Matteucci (1967), modern studies failed to apply them despite the illustration of its characteristic upside down L-shaped plot, which is in fact still present. Hence, it was seen that the churches of Sant’Anna and San Francesco actually corresponded to the churches of Hagioi Anargyroi and Hagios Nikolaos by position, likewise Arap Mosque and its former positional phases. This discovery by Sağlam (2018) secured the precise borders of Pera mentioned in the imperial edict dated May 1303.

Moreover, it was noticed that all the Byzantine shrines mentioned by May 1303 as well as the path of the borderline actually correspond to the grid layout of Galata, which is still present and was even better documented be-

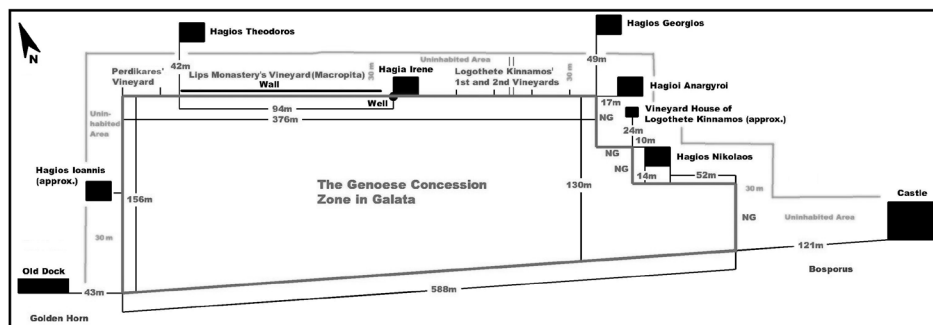


Figure 1. A sketch of the edict of May 1303 (Sağlam, 2019).

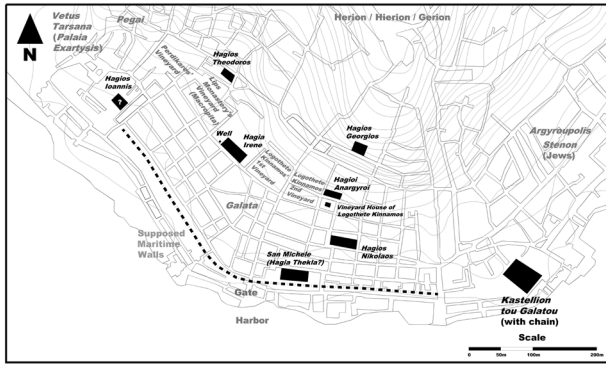


Figure 2. An accurate superposition of the edict of May 1303 (Sağlam, 2019).

fore modern demolitions, by Gaitan D'Ostoya and Rose & Aznavour maps from 1858-1860. Thus, it has also been argued by Sağlam (2018) that the characteristic urban pattern of Galata actually predates the Genoese period, as testified by the edict of May 1303 in comparison to all the discoveries concerning the phenomenon of positional continuity (Fig. 2).

It can also be said after the notary acts published by Bratianu (1927) that positioning some Genoese properties of Pera with a precise quadruplet order as of 1281-1284 seems coherent with an antecedent grid layout, as there are regular anterior, posterior and two lateral adjacencies concerning detailed positional descriptions of twelve possessions mentioned by those notary acts.

Besides, due to its central position and likely earlier origins, Perşembe Pazarı Street was supposedly the main marketplace street of Genoese called platea loggia next to the loggia building, the commercial center of the colony (Sağlam, 2018). Moreover, the adjacent vineyards of Military Logothete

Kinnamos in the edict of May 1303 were exclusively mentioned as the first and the second along the same linear course, which were located immediately between Hagia Irene and Hagioi Anargyroi that San Domenico / Arap Mosque and Sant'Anna / Yeni Mosque correspond to those shrines by position in later times, respectively. Hence, the aforementioned street also seems as if the pivotal dividing element, namely a cadastral road between two adjacent properties of the same person, therefore two well proportioned plots appeared for those vineyards of Kinnamos between the former Hagia Irene and Hagioi Anargyroi. If there was no urban element in between, it would be pointless to separately mention them one after another (Fig. 2).

With a second imperial edict dated March 1304, Pera was completed to a rectangle, as it was required due to a surrounding moat. Three Byzantine churches remained inside the Genoese quarter that their names were not provided. The Genoese were also allowed to construct strong civil buildings but no city walls (Belgrano, 1877; Sauli, 1831). Although identities of those churches remained unknown, they were apparently the previously mentioned Hagia Irene, Hagioi Anargyroi and Hagios Nikolaos. Therefore, the area later remained inside the well documented rectangular wall circuit with regularly arranged towers was actually ceded to the colonists in two phases; in May 1303 and March 1304. That rectangular form clearly stresses the antecedent grid layout of Galata that can be seen even today (Sağlam, 2018) (Fig. 3).

3. New interpretations concerning the urban morphology of Medieval Galata

Details about the continuity of modern Perşembe Pazarı Street like a main artery of the settlement during the Genoese period can also be found in later primary sources. According to the continued chronicles of Jacobus da Varagine (c. 1230-1298), an accidental fire burned nearly the whole Pera and the communal palace in 1315. Then, the palace was rebuilt in 1316 together with other civil buildings. On the

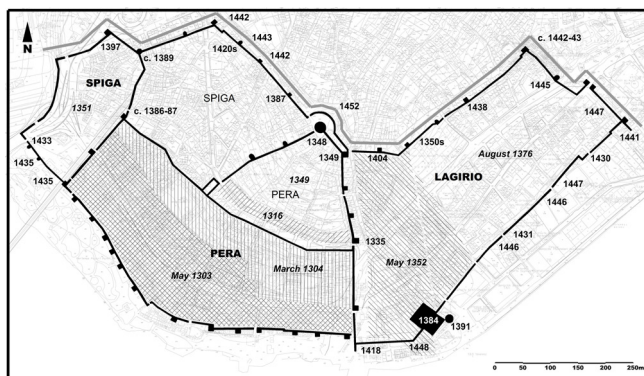


Figure 3. Main expansion and fortification phases of the Genoese (Sağlam, 2019).

other side, an inscribed slab also from 1316 tells very similar things but it additionally mentions that “houses next to the moat around the lands of Pera were permitted as a favor” by Emperor Andronikos II, who was highly honored by the inscription on that slab (Sağlam, 2018). A certain part of the former Genoese communal palace is still standing that the building is called “Bereket Han” and located in the junction of Galata Kulesi Street and Bankalar Street (Eyice, 1982). The aforementioned moat was dug sometime before March 1304 and surrounded terrestrial parts of the colony towards the hill. It then caused a second concession, as discussed in the previous section.

It was previously questioned by Sağlam (2018) that those “houses next to the moat” could be the regularly arranged rectangular towers around the first quarter that were well documented by some 19th century maps and photographs. However, they were not only present already in 1306 according to George Pachymeres and Nicephorus Gregoras but also primarily positioned along the Golden Horn, which is certainly not a moat. Hence, the concession of 1316 must be something else, where the emperor’s favor was needed.

As of 1316, the moat formed the outermost perimeter of Pera and for the internal area, the colonists were already free to construct any kind of strong civil buildings since March 1304. Soon afterwards, they abused this right and erected tower houses along their quarter, as quoted by Eyice (1967). Therefore, they did not need such a “favor” from the emperor for their own, already walled internal area by 1316, which was devastated by a fire a year ago. In this case, those “houses next to the moat” must be placed just out of the quarter and its moat, like disaster homes.

When considered current position of the communal palace (later Bereket Han) and direct accounts about its construction out of the first quarter in 1316, it appears that houses above a strip of land immediately next to the moat and towards the hill were allowed after the devastating fire of 1315. The positional description mentioned by the slab is especially noteworthy, there-

fore the palace itself was apparently one of those “houses”. A morphological trace that was formed by adjacent longitudinal plots in accordance with dimensions of the former palace is easily detectable in the site (Fig. 3). This area was formerly covered with vineyards but urbanized by the Genoese. As it happened following the official consent of Andronikos II, with whom the Genoese had quite well relations and highly honored on the slab dated 1316, the interpretation of Akyol (1997) about the communal palace that was constructed as an illegal building against the Byzantine authority and as a strong message to them by 1316 remains slightly inaccurate.

In this case, the known dimensions of the former communal palace from 1316 and its elaborate western facade also testify the preexistence of Perşembe Pazarı Street along the same course as well as its northeastern extension. This part is now called Galata Kulesi Street, which continues until the namesake Galata Tower.

To conclude, there are convincing evidences concerning the existence of a much older grid urban layout in Galata before the arrival of the Genoese, and a continuous northeastern axis that corresponds to modern Perşembe Pazarı Street and Galata Kulesi Street. This characteristic morphology most probably belongs to the Early Byzantine period of Galata (Sykai), where its major urbanization took place. This development can be well attributed to the reigns of Honorius (r. 395-423) and Justinian (r. 527-565) with regard to primary sources. By May 1303, predecessor Byzantine properties of Pera were already in a coherent spatial relationship with the aforementioned grid layout, such as Hagia Irene, the vineyards of Kinnamos, Hagioi Anargyroi and Hagios Nikolaos (Fig. 1, Fig. 2). When the Genoese built their new palace out of the colony in 1316, they considered the same road network towards the northeast (Fig. 3).

Moreover, as the main gates of the first Genoese walls directly match with each other through modern Perşembe Pazarı and Tersane streets, they can be supposed as the pivotal axes of the antecedent urban layout as if resembling

Cardo Maximus and Decumanus Maximus (Sağlam, 2018). In this case, the former morphology of Tersane Street with longitudinal city blocks that lasted until the 20th century well resembles the “main street at the sea level, lying along the foot of the mountain”, defined in the 5th century Notitia and supposedly included the single large portico of Sykai.

4. Other developments until the Ottoman takeover (1453)

The Genoese period of Galata caused further urbanization on top of an ancient city layout and the emergence of a medieval settlement character, which included both continuity and transformation. For instance, it was previously argued by Sağlam (2018) after some primary sources that Hagia Thekla, the oldest church of Sykai that is known from the 5th century could also be the single church of the suburb mentioned in the 5th century Notitia and it was probably located on the former position of San Michele, the parish church of the colony under the archbishopric of Genoa. Its plot was then occupied by Rüstem Pasha Caravanserai in the mid-16th century.

Major axes of historical cities often keep their original routes, likewise the Mese of Constantinople, which was well displayed by Müller-Wiener (2001) through primary sources and archeological evidence. Thus, as main landmarks of Pera like the loggia, San Michele and San Francesco were formerly concentrated along the supposedly ancient Tersane Street (Sağlam, 2018), it can also be argued that other public monuments of the 5th century Sykai like the Baths of Honorius and the Forum of Honorius were perchance positioned in relation to that major axis with the large portico, and the plots of its later public monuments that are mentioned above.

On the other hand, it appears after the edict of May 1303 that slopes around the first Genoese quarter in Galata were covered with vineyards, which all along delimited the grid layout of the urbanized area. Details about some of them can also be found in the typikon (liturgical book) of the Lips Monastery (today Fenari İsa Mosque),

dated 1294-1301. It indicates that a vineyard of 112 modioi and a garden of 3 modioi were located in Galata; also a vineyard of 237 modioi and gardens of 98 modioi (1 modioi = c. 0.1 hectares) (Talbot, 2000). During the same period, the convent of Anargyroi in Constantinople also had two places in Galata, which were a field of 30 modioi and of Barelina of 10 modioi, in which is a bathing place with poor people squatting nearby (Talbot, 2000). The name of the vineyard belonging to the Lips Monastery as “Macropita” (possibly Μακρά φύτεία = long plantation) well matches with the aforementioned modioi of immense agricultural lands. In this respect, a significant portion of these agricultural properties was zoned for construction following the edict of March 1304, when they remained inside the extended Genoese quarter.

Furthermore, according to Nicephorus Gregoras and two construction slabs, the triangular area between the first Genoese quarter and the hilltop was occupied and fortified by the Genoese between 1335-1349 with high towers, ramparts and moats. Meanwhile, John VI Kantakouzenos indicates that a tower was built above the hilltop by the Genoese in 1348 that is known as Galata Tower today (Sağlam, 2018). Then, the Genoese appear as a tax collecting authority in the western borough called Spiga (Pegai) as of 1351 (Balard, 1978). With the treaty of 6 May 1352, the Genoese obtained a certain piece of land delimited by the Castle of Holy Cross (the renamed Galata Castle) (Sauli, 1831), which was discussed in detail by Sağlam (2018).

The administration of the eastern borough called Lagirio (Argyroupolis) was given to the Genoese with another treaty dated 23 August 1376 (Ganchou, 2003). Afterwards, with regard to archival sources as well as a certain group of mural slabs with coat of arms and inscriptions, the aforementioned districts of Spiga and Lagirio belonging to Pera were secured and turned into proper walled boroughs with a series of moats, walls and towers. They were constructed in different phases that lasted until 1452 (Sağlam, 2018) (Fig. 3). Finally, the Ottomans

captured Pera in 1453 together with Constantinople. The colony was surrendered without a battle, therefore secured privileges that Mehmed II introduced with the edict of 1 June 1453 (Şakiroğlu, 1982).

As a result of all those Genoese developments, Galata also kept its typical medieval characteristics even after modern demolitions in the 19th century that similar fortified settlements can be found all along the Mediterranean Sea (Camiz and Verdiani, 2016). Not only medieval but even ancient origins of a city affect modern urban works that can be tracked to some extent (Strappa, Carlotti and Camiz, 2016).

5. Archaeological remnants reconsidered: Water infrastructure

Not many physical traces were recorded from the ancient Galata and its surroundings but there are still sufficient discoveries to give an idea especially about the water infrastructure. For instance, speaking of western territories, being the former Pegai (modern Kasımpaşa), a large cistern probably from the 5th-6th centuries was discovered in 1878 at the bottom of the Ottoman cemetery in Kasımpaşa. It had two rows of roughly shaped and superpositioned marble columns, like the ones of the Cistern of Philoxenos (Binbirdirek), and a ceiling with domed vaults. It was located in Yaşmak Sıyran Street with an east - west orientation and had a rectangular shape with a width of 17,3 meters and a height of 4 meters. The cistern had stairs on its southern facade and also supportive buttresses. It was listed on 24.03.1968 but then demolished. Some of its columns were moved to Istanbul Archaeological Museum (Envanter, 2019a; Eyice, 1967; Fıratlı, 1969; Forchheimer and Strzygowski, 1893).

Another Byzantine cistern was found in the north of the aforementioned monument, near Kasımpaşa Stadium and 43 meters above the sea level. It was positioned into the bedrock on the western cliff of that extremely steep area. This small, rectangular structure had dimensions of 2,3 x 3 meters. It also had brick masonry walls, a brick vaulted ceiling above, and

a small opening on its top. A small, latter collapsed aperture towards the cliff was positioned on the southern corner. It was probably reused by the Ottomans as a water distribution center (Envanter, 2019b).

It is known that true to its name, Krinides / Pegai (springs) was rich in natural water resources during ancient times (Dionysius of Byzantium, 2010). Some Byzantine walls and nearby tombs were also recorded in Kasımpaşa, towards further north of both cisterns mentioned above (Envanter, 2019c; Kimmelfield, 2019).

There were some discoveries also in the east, around the former Argypolis (modern Tophane) that some scant Early Byzantine ruins and various small artifacts were found. In this context, a large and supposedly mid-5th century cistern was discovered in Siraselviler Street together with some related foundations and nearby graves, which were attributed to the leprosarium of Saint Zotikos. Brick arched 7th century foundations with adjacent graves in Kadiriler Street, and the 6th-7th century baths next to Meclis-i Mebusan Street with a marble 4th-5th century sarcophagus were further noteworthy ruins from this area (Kimmelfield, 2019). It can be said that the aforementioned attribution of Saint Zotikos is topographically not very accurate with regard to the previously supposed location of Elaia. In addition, some arched Byzantine foundations are still visible along Kemeralı Street, which were heavily altered during the Late Ottoman period (Envanter, 2019d).

Moreover, foundations of a cylindrical and supposedly single domed structure with a distinctive Byzantine brickwork was seen in the northeast of Galata. This recently restored ruin is located 290 meters northeast of Galata Tower and accessed through Lüleci Hendek Street (Beyoğlu District, Hacımimi Quarter, city block 145, parcel 5). The approximate radius of this structure is 5 meters and its fine brickwork resembles Early Byzantine works.

In Sykai / Galata proper, the collapsed cistern of Saint Benoît with roughly 300 pillars and ruins of the ancient forum, which was located next to the caravan-



Figure 4. The tunnel beneath Bereketzade Ali Efendi Mosque (Kuş, 2009).

serai and harbor were mentioned as significant remnants noticed as of the 1540s by Gyllius (2016). In addition, in Bankalar Street and next to Saint Pierre Han, some ruined infrastructures were documented. These were clay brick masonry walls supported by buttresses and covered with multiple barrel vaults that later collapsed to a large extent (Envanter, 2019e). There were also some miscellaneous marble artifacts discovered around Galata, such as a statue base from the 1st century BC; a column dedicated to Pompey; a milestone; an allegoric sculpture; an inscription in Greek from 391; and various unidentified fragments of spolia on Galata Walls and Arap Mosque (Dallegio d'Alessio, 1946; Ebersolt, 1921).

Galata Kulesi'nin altında gizli bir tünele rastlandı

**TURİSTİK BİR HALE
GETİRİLMEK ÜZERE
RESTORE EDİLEN
KULENİN AHŞAP
İKİ KATI SÖKÜLDÜ**

GALATA Kulesinin İstanbul Belediyesi tarafından girilen onarımına devam edilmektedir. Bu maksatla 90 yıl önce kulenin üzerine ilave edilen iki ahşap kat sökülüştür. Kulenin temelini takviye maksadıyla yapılan kazıda ise dört metre derine inildiğinde, kulenin merkezinden geçen bir tünel ortaya çıkmıştır. 70 santim genişliğinde 140 santim yüksekliğinde, muhtemelen aşığılarla bu tünelin Cenevizliler tarafından gizli kaçış yolu olarak denize kadar indiği ileri sürülmektedir. Tünelin içinde otuz metre kadar ilerlenilmiş ve daha



Gizli tünel : Galata Kulesinin temelini takviye etmek için yapılan kazılar sırasında Cenevizliler zamanında yapılan gizli bir tünel bulunmuştur. Bu tüneli Cenevizliler, Galata'nın en hakim yerinde inşa ettikleri kuleden atılacak denize inmele ve içlerinde cıvık tasınmak veya kaçmak için inşa ettikleri sanodilmektedir. Tünelin içinde ayrıca kafatası ve insan kemiklerine de rastlanmıştır.

Figure 5. The tunnel beneath Galata Tower (Hürriyet, 1965).

Perhaps the most significant ancient remnants are brick vaulted tunnels in Galata. A portion with a width of 0,8 meters and a height of 1,5 meters is located right beneath the minaret of Bereketzade Ali Efendi Mosque (Fig. 4). Having a crook there, the tunnel runs straight towards Galata Tower in the north. It is almost parallel to the southwestern facade of that mosque. After passing it and having a second turn nearby, it then continues towards the Golden Horn in the south, and supposedly all along Bereketzade Medresesi Street. It was dated to Late Antiquity / Early Byzantine periods after small findings and a section of 60 meters was recently restored. Two nearby graves from the same period and scant aboveground foundations with stamped bricks were also found. The mosque building itself was reconstructed in 2006 (Envanter, 2019f; İSTED, 2019; Kuş, 2009).

Another brick vaulted tunnel with a clear north - south direction is located right below the cellar of Galata Tower, which is 1,5 meters high and 0,72 meters wide (Fig. 5). It was discovered before the restoration works of 1960s and interpreted as a Byzantine construction (Anadol, 1964; Anadol and Arıoğlu 1979; Eyice, 1967; Hürriyet, 1965). A small, upper part of its barrel vault is still visible from the nearby public space, as the former ground level in the



Figure 6. The tunnel in the north of Galata Tower and near a cistern (Sağlam, 2019).

exterior was lowered in modern times and vaults of the tunnel section out of Galata Tower were destroyed. Dimensions and overall architecture of this tunnel section is very similar to the one discovered below Bereketzade Ali Efendi Mosque.

Finally, in 70 meters north of Galata Tower and next to Küçük Hendek Street (Beyoğlu District, Şahkulu Quarter, city block 283, parcel 56), a ruined tunnel structure was seen during an excavation next to a cylindrical, single domed and due to its bricks supposedly 18th century Ottoman cistern (Fig. 6). Its position well corresponds to the straight northern route of the ancient tunnel below Galata Tower.

It has been said by Ibn Battuta (1929) that a small, dirty river was running through the main marketplace of Galata as of the early 1330s. A visible portion of an ancient aqueduct in the form of an underground tunnel was also noticed during 1540s by Gyllius (2016), which reached the coastal area next to the caravanserai and the supposed ancient forum. These two narrations most probably defined the same thing, which was supposedly the southern end of the water conduit that is known after the previously mentioned archaeological discoveries. The current of its final course before reaching the Golden Horn must have been used by nearby shops during the 14th century for evacuating garbage to the sea.

Although there is little evidence about the water supply of the area in ancient times, it has been questioned by Crow, Bardill and Bayliss (2008) that Sykai must had a well water infrastructure due the Baths of Honorius located there, which was presumably built in 395-423. Hence, the water supply of Byzantine Constantinople from northern resources around Belgrad Forest probably also nourished Sykai and had a similar route with the Ottoman water system (of Taksim) until modern Taksim Square (Crow, Bardill and Bayliss, 2008). It has also been briefly argued by Çeçen (1992) that around the time of the Ottoman conquest in 1453, Galata received potable water from nearby resources and through small galleries inside hills.

A straight connection between all of those Late Antique water tunnels seen in Galata as a part of a very long water system is evident. They were simply subterranean aqueducts once brought potable water to Sykai and apparently also to the Baths and Forum of Honorius in the very central part, near the coast. A construction or improvement to the water infrastructure of Sykai also by Honorius during his reign between in 395-423 is likely due to the Baths of Honorius and the Forum of Honorius that were already present in this suburb, according to the 5th century *Notitia*.

There are further connections between Honorius and water structures of Constantinople. That is to say, emperors Arcadius (r. 395-408) and Honorius intended to safeguard the aqueducts of Constantinople with a statute dated 29 May 395 and introduced harsher punishments against any violations instead of using public reservoirs. Then, with two laws dated 29 and 31 December 396, both emperors diverted public entertainment expenses to the construction and repair of the Theodosian aqueduct of Constantinople, except for festivities on their own birthdays. A final statute dated 29 October 412 and issued by emperors Honorius and Theodosius II (r. 408-450) was about the construction of a new, elegant portico in front of the Baths of Honorius in Constantinople (Theodosius II, 2001). It should be noted that as of the 5th century, a second Baths of Honorius was located in the 5th region of Constantinople, right across Sykai (modern Sirkeci) (Matthews, 2012).

As previously discussed, the rebel of Theodoric reached Sykai in 487 and the aqueduct of Constantinople was also cut. Then, Sykai had a large scale restoration by Justinian I in 528. These incidents might be relevant to the water supply of Sykai in terms of a probable 6th century repair but there is no archaeological evidence or research so far. This underground water system of Sykai / Galata probably also fed the mentioned bathing place near poor people's houses there, which appeared in the *typikon* of the convent of Anargyroi, dated 1294-1301.



Figure 7. Ottoman water system of Galata (Sağlam, 2019, after Çeçen, 1992).

Moreover, according to a treaty dated 5 September 1341 and published by Bertolotto and Sanguineti (1896), the underground water system of Galata was highly likely in use also during the Genoese period. With this treaty, the Byzantine imperial authority obliged the Genoese not to inflict any harm on Greeks while conveying, canalizing and collecting water for Pera. Therefore, the underground aqueducts in question must be used by the Genoese in order to meet this liability.

The Ottoman water supply of Istanbul that originated from northern resources had approached Galata all along modern Taksim Square, İstiklal Street and Galip Dede Street. After a tripartition around Galata Mevlevi House, it supplied the walled quarter through laterals, namely modern İlk Belediye, Lüleci Hendek and Yolcuzaade İskender streets (Fig. 7) (Çeçen, 1992; Özgüleş, 2014). Correspondingly, a large section of Ottoman water tunnel was discovered below İstiklal Street in 2012. It is 563 meters long and located between the French Cultural Center and Galatasaray High School (TRT Haber, 2012). A year later, a smaller water tunnel with a very similar appearance to the ones detected in Galata was discovered below Taksim Square (Habertürk, 2013). However, the origin of this section is absolutely uncertain.

Hence, it appears that the Late Antique water system had a different and rather direct route within Galata Walls when compared to the Ottoman water supply system. Yet, it is highly probable that they once had the same route from the main resource until the north of Galata Tower, where the Ottoman system split up for some reason.

6. Burials along the ridge

Concerning another topographical issue, it has been suggested by Dalleggio d'Alessio (1946) that the necropolis of Sykai was located at Kalafat Yeri next to Azap Gate, as abundant funerary debris and sculpted marbles were found there. It should also be mentioned that some ancient funerary debris was unearthed within the plots of Arap Mosque and Yeni Mosque. They included a small funerary stele with an angular pediment, where the relief of a half-draped man with an object on his right hand was placed inside a niche that the lower edge has a Greek inscription; and an elliptical column of grayish marble with another Greek inscription, respectively (Dalleggio d'Alessio, 1946). In this case, it can be said that Sykai, known as a fig orchard by the 2nd century also served as a cemetery to Byzantium until the early 5th century, when its major urbanization took place. The aforementioned sculpted funerary materials apparently belonged to Hellenistic / Roman periods. Yet, it should be noted that the monumental tomb of Hipposthenes, who was a hero from Megara lived in the 7th century BC was accordingly located in the west of Sykai (Dionysius of Byzantium, 2010). Therefore, Sykai perchance had burials even during the Archaic period but this function then continued towards the north, as discussed below.

A larger burial location was detected around the church of Ss. Pietro e Paolo. There were some significant discoveries during its 18th and 19th century restorations, such as a number of



Figure 8. Funerary steles in the church of Ss. Pietro and Paolo (Sağlam, 2019).

ancient tombs formed of large bricks, marble funerary steles, and several poorly cooked clay urns in the form of a pot, which contained lachrymatory glasses and bones (Dalleggio d'Alessio, 1946).

Those steles, being four in number are still located above the high wall in the right hand side, after passing the main courtyard gate of the church of Ss. Pietro and Paolo in Galata. They were found during the reconstruction of 1838-1843 (Dalleggio d'Alessio, 1946). Two sculpted artifacts can be safely dated to the Roman imperial period before the foundation of Constantinople (Fig. 8). Among the remaining two steles with crosses and some inscriptions, one of them was dated to the 6th century by Curtis and Aristarchis (1885), which tells: EN|ΘΑ|ΔΕ KATAKI|TE ΣΑΒΒΑ|ΤΙΣ ΠΙΣΤΟΣ (Here lies down Sabbatis the faithful). It can be said that the other one also belongs to the 5th - 6th centuries with regard to its epigraphic style (Fig. 8)¹.

Two Late Antique / Early Byzantine graves discovered near Bereketzade Ali Efendi Mosque together with a section of the water tunnel from the same period were already mentioned in the previous section. Then, towards the southeast of Galata Mevlevi House, today Serdar-ı Ekrem Street no. 30, an Early Byzantine cemetery with triangular graves and stamped bricks was found during the first half of the 20th century (Bardill, 2004; Mamboury, 1951). Further funeral materials were found towards the north, as a terracotta coffin with a skeleton was unearthed in the northern end of Karaköy - Beyoğlu funicular tunnel (Dalleggio d'Alessio, 1946).

Much above, ten Byzantine graves with rectangular bricks forming triangular covers were discovered during the restoration of Casa Garibaldi in 2014, and dated to the 4th-6th centuries after small findings and radiocarbon dating (Radikal, 2015; Hürriyet, 2016; Bornovalı, 2016). Slightly upwards from that location, two funerary steles, nearby human bones and lachrymatory glasses were found during an excavation in Surp Yerrortutyun (Üç Horan) Armenian Apostolic Church. Those steles reportedly depicted the

scene of a typical funerary meal, accompanied by Greek inscriptions (Dalleggio d'Alessio, 1946). There were five funeral discoveries around and towards the northeast of that site, all from the 3rd-1st centuries BC (Fıratlı and Robert, 1964).

Finally, a very significant Late Byzantine necropolis including more than 50 burials was found in Taksim. It consisted of 47 brick tombs, 2 stone tombs and many nearby inhumations, which were discovered behind the famous Ottoman reservoir in Taksim Square and dated after various small findings from the area (Envanter, 2019g).

With a series of strict statutes issued between 340-356, Constantius forbade the demolition of tombs and removal of their materials for any purpose but those penalties were mitigated by Julian in 363. Then, in 381, Gratian, Valentinian II and Theodosius I issued a law that burial sites must be placed out of Constantinople due to contamination reasons (Theodosius II, 2001). Finally, in two burial laws issued by Anastasius I and Justinian I in the 6th century, Sykai was considered as a part of Constantinople (Justinian I, 2015; 2018). In this case, the temporary usage of Sykai walls for corpses during the plague of 541-542 can be interpreted as an exceptional situation due to a disaster. Nevertheless, it can be argued that after all the efforts by the aforementioned emperors, new and larger burial sites appeared out of Constantinople as well as Sykai during the Early Byzantine period.

7. Discussing continuities and discontinuities

When considered the funerary discoveries concerning Galata, it can be said that the tombs display a topographical and also chronologically repetitive continuity while moving away from Galata towards the north; from Hellenistic / Roman periods until the Late Byzantine period; and through modern Galata Kulesi, Bereketzade Medresesi, Galip Dede and İstiklal streets, likewise the supposed Late Roman / Early Byzantine water system along Bereketzade Medresesi, Galip Dede and İstiklal streets. That burial site reached modern Taksim from

Galata by Hellenistic / Roman periods. This area was intensely used also during the Early Byzantine period and reached modern Taksim once again by the Late Byzantine period.

It was already revealed in previous sections that modern Perşembe Pazarı and Galata Kulesi streets as well as the characteristic grid urban layout of Galata date back to pre-Genoese times of Galata. In fact, a probable ancient origin of the strong axis that consisted of modern Galip Dede and İstiklal streets was previously set forth by Dalleggio d'Alessio (1946) but lacked a larger scale topographical, chronological and archaeological elaboration. Therefore, when considered all the burials found along the main topographical axis mentioned above, an ancient road can be supposed for the same course, where the Early Byzantine underground water system was also positioned. Such urban elements often superpose, but not always.

Concerning the concentrated cemeteries along the aforementioned route, an ancient road was highly likely in connection with that ridge as an attractor urban element, which supposedly caused adjacent burials in rows for long centuries; all along the ridge between Galata and Taksim. Concerning this phenomenon, it has been argued by Camiz (2018) that mountain ridges are natural continuous attractors, therefore routes within certain conditions take the shape of a continuous at-

tractor. Hence, the “ridge-top theory” formerly set forth by Gianfranco Caniggia in 1976 can also be interpreted as the result of the attraction of geographic features on anthropic routes (Camiz, 2018). Burial sites around Argyroupolis and its urban morphology point a similar situation along a second ridge through modern Necatibey, Defterdar and Siraselviler streets in the east, which most probably linked to the supposed main axis of Sykai with the large portico, but this subject needs further research (Fig. 9). There were burials along the ridge since the Hellenistic period but victims from the nearby leprosarium of Saint Zotikos from the 4th century supposedly increased the number of burials there. When considered the need of more burial sites of the new imperial capital, that funerary practice on the other side was well continued through centuries. Corpses belonging to the victims of the Plague of Justinian and recovered from Sykai walls, where they were initially disposed were probably reburied towards the hill behind Galata in the mid-6th century. In time, a site formerly known as Elaia that was named after olives then turned into an intense cemetery, and its name was also changed (Hierion) in accordance to the later tradition. This function lasted until the Late Byzantine period and stretched out a distant position (Taksim) once again.

On Tabula Peutingeriana, which is a Roman road map from the 4th-5th centuries, a road reached Sykai after following the Thracian Black Sea coasts until Philia (Karaburun) and then passing Thimea for 12 Roman miles (24 km) (Talbert and Elliott, 2010). “Timaea turris” was located on the western coast of the Bosphorus and towards the north, which falls around modern Sarıyer (Dionysius of Byzantium, 2010). In fact, the approximate distance between modern Sarıyer and Galata matches with the related section of the Roman road map. In this case, the supposed ancient axis along the ridge of modern İstiklal Street with regard to topographical and archaeological evidence was perchance the southern end of the ancient road between Sykai and Thimea, known from the contemporary Tabula Peutingeriana.

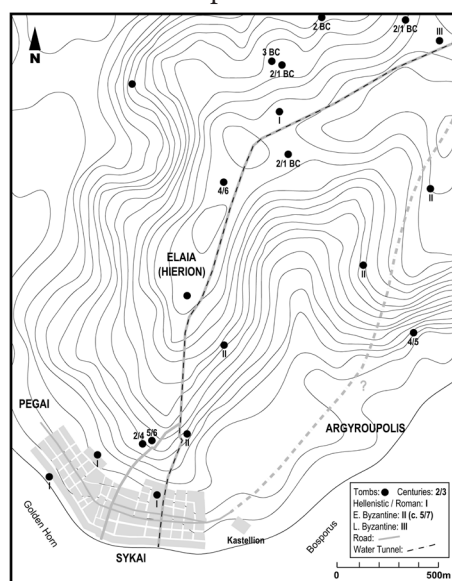


Figure 9. A hypothetical map for the ancient water and road network (Sağlam, 2019).

When considered the known final route of the Late Antique / Early Byzantine water tunnel of Galata, its uncertain northern route can be safely supposed along that ridge due to an evident topographical advantage in order to distribute water effectively to lower suburbs; likewise the Ottoman water system between modern İstiklal Street and Taksim Square. The crook of that ancient water tunnel (together with the antecedent road) in the position of modern Bereketzade Ali Efendi Mosque perhaps intended to reduce the slope and to slow down the water pressure against the steep topography that the nearby Perşembe Pazarı Street also has the same morphology on two spots. In addition, it can be supposed that cisterns of Pegai and Argyroupolis were also supplied by some secondary connections from that major water conduit but it should be noted that Pegai had its own, perhaps limited natural water resources.

The construction of Galata Walls with multiple gates during the 14th-15th centuries but especially Galata Tower in 1348 most probably repelled the antecedent continuous route of modern Galip Dede Street and obstructed its bifurcated continuity towards modern Galata Kulesi and Bereketzade Medresesi streets in the south. Therefore, it seemingly diverted itself towards Yüksek Kaldırım Street, where a Genoese city gate was located, which was called Küçük Kule (Small Tower) Gate during the Ottoman period. However, it can be said that the Early Byzantine water tunnel under the ground safely kept its ancient, straight route along the ridge and beneath the Late Medieval Galata Tower (Fig. 10). It is clear that the Genoese had considered the ancient water tunnel and positioned Galata Tower directly on its top, probably for securing the water resource of the colony as well as the need of the tower itself. In this case, Camiz (2018) argued that the “ridge-top theory” can also be interpreted as a result of the repulsion of anthropic routes by anthropic features. Then, a repelled route is inclined to be attracted by a contemporary attractor feature, either anthropic or natural, such as a city gate (Camiz, 2018).

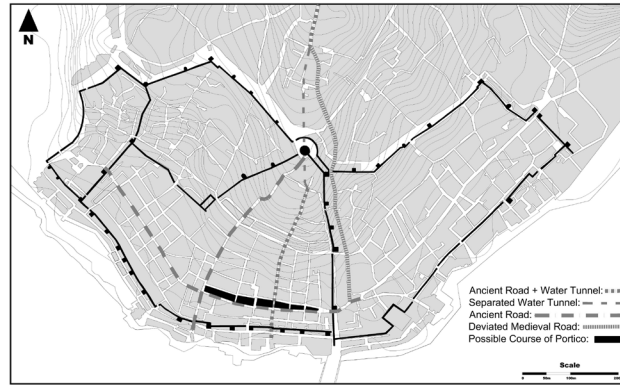


Figure 10. A hypothetical map for the continuities and discontinuities (Sağlam, 2019).

8. The aftermath

For the area immediately outside Galata Walls, a c. 1481 copy of the famous Buondelmonti panorama (originally from c. 1422) shows a Turkish cemetery (sepulcra turcarum) in the west and vineyards (hic sunt vinee burgensium Peyre) in the east, respectively (Buondelmonti, 2005). Similarly, “Vigne de Pera” also appears on many 16th-17th c. panoramas of Istanbul. It appears that the cemetery function of the area from modern Şişhane until Kasımpaşa, formerly used by Greeks and Genoese was continued by the Ottomans as “Küçük Mezaristan” (Small Cemetery) (Eyice, 1996; İşli, 1992; Kömürçiyen, 1988).

The Ottomans called the nearby coastal gate of Galata Walls “Meyit” (Death), which recalled that cemetery. Its landing stage was used for disembarking Ottoman funerals brought from the city, which were buried on the other side of the Golden Horn (Kömürçiyen, 1988). “Büyük Mezaristan” (Big Cemetery) was located around modern Taksim. Those two cemeteries once occupied a huge area along the topography. Both of them were disappeared in the late 19th century together with the previously mentioned agricultural areas (Eyice, 1996). This hilly region kept a functional and spatial continuity for centuries but had a complete urbanization in modern times.

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Endnotes

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