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Spatial Analysis of Ottoman Hammams in Erzurum

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Abstract

Throughout history, water has been one of the defining elements of life in all cultures. In line with the needs of society, public spaces have been designed for their access to water. Baths are also structures built for faith, cleanliness and health. The study examines the spatial organisation in the Ottoman Period baths through examples. Following this, the baths in Erzurum, a winter city, are discussed. Within the scope of the study, 13 baths in the Yakutiye district of Erzurum, which still exists today, were examined through literature and plan drawings. As a result of the evaluations, it was determined that, in some, the function has changed, while others have undergone spatial changes. Only two of Erzurum's hammams have undergone a function change, namely Askeri Hammam and Şeyhler Hammam. Although Gümrük Hammam continues to preserve its function, it is no longer operational. Other hammams, however, still operate in the same way. This study draws attention to the baths that had particular importance for cleanliness, health and rituals during the period. The study area is located in Eastern Anatolia, home to many Ottoman-era baths in Turkey; it is bordered by the city of Erzurum, which has been home to many civilisations. This study contributes to the literature on how the culturally important baths of the Ottoman Period are organised as a place.

Keywords

spatial analysis, hammam, Ottoman hammams, Erzurum, architectural history

1 Introduction

Water, a basic human need, has always been essential in individuals' lives. Water has had a determinative role in all cultures throughout history. There had arisen a need for a structure where individuals could meet their needs related to cleaning, health, beliefs, and personal hygiene (Apaydın Başa, 2009). Hammams are the outcome of people's need for cleaning and washing. Hammams, which have gradually transformed in line with human needs since ancient times, played an important role in numerous cultures (Ertuğrul, 2009). In some societies, hammams had a special place due to their significance in ritual ablutions (Aru, 1941). Hammams represent different architectural typologies, such as Greek, Roman, Byzantine, and Turkish, depending on the culture of the location where they were built.

The first traces of hammams can be found in Greek civilisation. Greek hammams served as health institutions. Although there is no detailed data on the plans of the hammams of this period, they were known to be simple and functional (Yegül, 1992). The hammams built by the Greeks became an architectural point of reference for Roman architecture (Işın, 1995), becoming more sophisticated and widespread during the Roman Empire era (Ürük, 2016).

These structures started to serve as places of entertainment in addition to their function as sites for public bathing (Eyice, 1997). During the Roman period, hammams were centres for sports such as ball games and wrestling and a socialisation centre where business and dinner meetings were held (Mert, 2009). As the Empire grew, monumental hammams with a daily capacity of 3000 to 4000 were built. It is thought that the source of hammams heated with the hot air obtained from a central fire date back to the first century B.C. Old hammams with heated rooms and running water were also built in the 2nd century BCE; such hammams had been popular in Anatolia. With the transition from Greek hammams to Roman hammams, the undressing room, a cold room, a warm room, and a hot room became parts of the architectural typology of such structures. After the Roman Empire, the hammam

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tradition lived on in the Byzantine period (Aslan, 2020; Ertuğrul, 2019; Sear, 1982; Ürük, 2016).

There are findings in the literature on the existence of numerous Byzantine hammams. It is known that one of the hammams in Istanbul today is from the Byzantine period (Eyice, 1997). The hammams built during the Byzantine era after the 8th century mostly belonged to monasteries and empires, with the plans showing similarities to monasteries (Berger, 2012). The hammams built in the Middle and Late Byzantine eras consisted of a small entrance, a domed main compartment, and a different area behind this with hot water basins on the furnace (Berger, 2012; Orlandos, 1958).

Hammams grew in significance in societies that accepted Islam. During the Seljuk and Ottoman eras, hammams became architectural structures with a unique identity (Orhan, 2003). After arriving in Anatolia, Turks transformed hammams into hot springs to conform to the Islamic cleaning rules. They did not adapt their culture to the hammams left over from other societies working with heated water as their architectural traditions differed, and they preferred to use running water in the baths due to the rules stipulated by their religion (Önge, 1988). While the heating systems used in Turkish hammams are similar to those of Roman hammams, the spatial organisation differs. Turkish hammams were built based on a rectangular floor plan. The sequence of rooms in Turkish hammams is as follows: the undressing room, a cold room, a warm room, a hot room, and a furnace (Eyice, 1997).

Seljuk Turks had attached importance to the hammam culture before they settled in Anatolia. However, today, there is insufficient data on the hammams they built in different regions of the world. It is known that Seljuks used hammams from scraps of information, such as when Sultan Keykubad I went on expeditions with a tent hammam at his disposal (Önge, 1995). The Seljuks attached a great deal of importance to hammams, and after they settled in Anatolia, they built baths in the region in the 12th century. These hammams were unearthed during the excavations in Ani that took place between 1965 and 1967. These hammams consisted of a dressing room across an axis, a square and domed warm room, a domed hot room with a barrel vault and four iwans next to the furnace (Balkan, 1968; Eyice, 1997). In Seljuk hammams, the dressing rooms were in the form of monumental spaces. In the middle of these spaces was a shadirvan to allow the visitors to rest (Yegül, 1992). In this era, the concept of the double hammam emerged. The double hammams consisted of two dressing rooms, cold rooms, hot rooms, and a furnace at the very end, located across two opposite sides of an axis (Çelik and Aydemir, 2018). The hammams built in this era were adorned with hand-drawn decorations made with coloured paint on plaster (Eyice, 1997).

Apart from the Seljuks, the Ottomans also left a remarkable hammam legacy. The study examines the Ottoman era hammans; the architectural features of which are discussed in Section 1.1.

1.1 Architectural features of Ottoman hammams

The water structures were first built around Bursa during the Ottoman Empire era. Aqueducts, cisterns, fountains, and hammams were the first water structures built in this period. However, among these structures, hammams attached special importance, and many were built as they allowed individuals to perform ritual purification and became income-generating businesses (Aslanapa, 2005; Eyice, 1997). The increase in the number of hammams in the Ottoman period meant an increase in the number of spaces for daily socialisation. Thus, hammams became social venues where people ate various foods and drank sherbet, especially women (Cingöz, 1994).

In the Ottoman era, in line with their functions, hammams were grouped under three categories: bazaar baths open to public use, private baths built in palaces, mansions and houses, and hot spring baths used for treatment purposes (Erat, 1999). During this time, hammams were built as a part of various different structures. If adjacent hammams were to be built for structures with different functions, the hammam would be completed before the main structure (Mazlum, 2019). In architectural terms, Ottoman hammams were built as single and double hammams. Double hammams consisted of two parts, one for men and the other for women. In double hammams, the doors to the respective sections were located on different streets to ensure privacy. Single hammams are somewhat rare (Şimşir, 2004). Whether the hammam would be built as a single or double hammam was decided based on the number of people living in the residential area and the need of the said people (Bozok, 2005; Yörük, 2016).

During the Ottoman era, hammams were built with privacy in mind. Ottoman hammams had a rather introverted architecture due to the emphasis on the sense of privacy in the context of culture and religion (Uluumay, 2009). The single or double structure of the hammam would not lead to a change in its plan. However, it was common that the men's section was larger than the women's (Kuban, 1975).

In Turkish hammams, the interior consists of dressing rooms, warm rooms, hot rooms, private rooms, and a furnace (Apaydın Başa, 2009). The dressing room would be located at the entrance of the hammams. It served as a rest stop before entering the main chamber and after the bath (Ertuğrul, 2002). The most ostentatious areas of the hammams are the dressing rooms. These spaces have multiple floors and a gallery. Wide sofas are surrounded by wooden poles and a hearth in one corner (Arseven, 1973). In Ottoman hammams, this section is either square or a quasi-square rectangle (Ürük, 2016). The dressing room would generally be constructed using light materials such as wood. After the dressing room, the warm room is next. There are hammams where a cone is added to the door between these two spaces to prevent steam escape (Kula Say, 2007; Kuruçay, 2011). The warm room serves as the entrance to and exit from the hot room. This room helps visitors keep their body temperature balanced, preventing them from being negatively affected by the significant temperature difference between the dressing room and the hot room. This area would usually be in the shape of a horizontal rectangle. The top of this room, where predominantly marble is used, would be covered with a barrel vault or a dome (Ertuğrul, 2002; Ülgen 1950; Yılmaz et al., 2021).

The hot room, reached after going through a human-sized door in the warm room, is where individuals cleansed themselves (Orhan, 2003). In this room were basins and navel stones. In the basins, which would be placed on marble benches 20 cm from the ground and 70 to 100 cm wide, were cold and hot water. The navel stone would be placed in the middle of the room, 40 cm from the ground. This room is the hottest in the hammam. The hot room also included halvets, which were used for private bathing. Halvets were special niches without doors, reserved for bathing alone in private. The hot rooms would be built as masonry structures (Aru, 1941; Kula Say, 2007; Orhan, 2003; Ürük, 2016).

The furnace would be located behind the hot water tank, next to the hot room (Ertuğrul, 2002). This was an installation system used for heating the hammam. The entrance of the furnace would be located at the back of the hammam, under the bath floor (Önge, 1995). The furnace heated the hammam, and the heat rising from the fire would be transferred through the walls and special passages under the marble floor (Apaydın Başa, 2009). The length of the furnace would be equal to the length of the hot water tank. Its width, on the other hand, would vary depending on whether it was a single or double hammam and the condition of the land where it was located (Önge, 1988).

Ottoman hammams differed by the shape of the hot room. Six hammam plan typologies were identified, differing in line with the location and configuration of the hot room (Eyice, 1960) (Fig. 1):

- There are four iwans in a cross-shape with four iwans and corner cells. Halvets are located in the corners of the hot room (Orhan, 2003). Halvets and iwans are elevated in these hammams. This plan was more widely used in the hammams of madrasas and houses (Ürük, 2016).
- Hammams with a star-like hot room have similar plan typologies to those of ancient spas and hammams in Anatolia (Ertuğrul, 2002). The navel stone has a hexagonal, heptagonal, or octagonal shape (Eyice, 1960). Around the navel stone, on the walls, are vaulted niches (Demirdal, 2014).
- Hammams with halvets arranged around a square-shaped hot room have a rectangular or square floor plan. There are square halvets on three sides of the navel stone (Orhan, 2003). The number of hammams built with this plan are few in number (Eyice, 1960).
- In Hammams with multi-domed hot rooms, heat is divided equally to all areas with the help of arches. Each of the equally divided areas is covered with a dome (Ertuğrul, 2002). In such hammams, there is usually no navel stone (Orhan, 2003).
- Hammams with a hot room with a domed central halvet and two more halvets are covered with flat vaults on the sides, separated by two arches with a dome in the middle, and extending horizontally. In the back are two halvets (Ertuğrul, 2002). The navel stone is located under the front dome (Orhan, 2003).

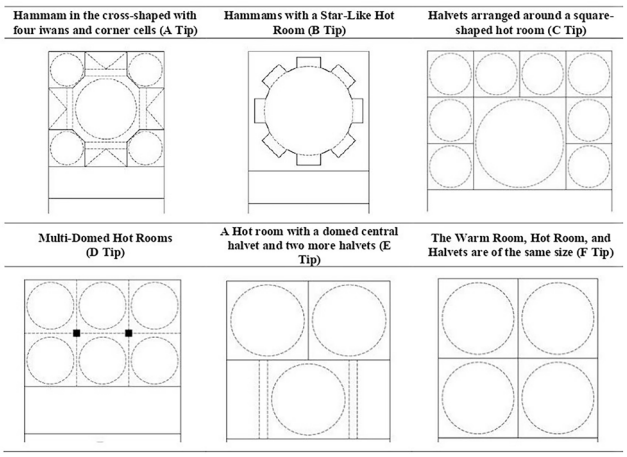


Fig. 1 Plan typology of Ottoman Period hammam structures (Ertuğrul, 2002)

- Hammams, where the warm room, hot room, and halvets are the same size, are usually small, like home hammams (Demirdal, 2014). In this plan, the warm room, the hot room, and the halvets are the same size. Such hammams are covered with a dome (Eyice, 1960).

There are generally no ornamental elements on the exterior of Ottoman-era hammams because they are closed structures. Ornamental elements are usually used in the interior; however, such elements have differed over time. The predominant ornamental elements used are stonework decorations. They are used on basins, in some areas of the sitting benches, and the entrances to the halvets. The use of domes in the dressing rooms was common in the Early Ottoman Period hammams and were adorned with stars, spirals, and stripes. If any, the headers of the columns in the hot room would be decorated with lozenges or muqarnas (Aslanapa, 2005; Ertuğrul, 2009; Eyice, 1997; Kuban, 1975; Orhan, 2003).

Hammams were built throughout Anatolia during the Ottoman era, of which some survived to the present day. Indeed, one of the provinces with a rich history and various structures still standing since the Ottoman era is Erzurum. In Section 2, Ottoman hammams in Erzurum are examined.

2 Ottoman-Era hammams in Erzurum

Erzurum is a politically and militarily important province as it serves as an entrance point to the country from the north and the east. Therefore, the city hosted many civilisations throughout history. The Byzantines founded the city to fight off Persian attacks. During this period, most of the city's population comprised Armenians and Greeks. With the settlement of Turks after the Battle of Manzikert of 1071, the Muslim population in Erzurum started to increase. After Seljuks had achieved established sovereignty in Erzurum in 1072, Turkish-Islamic architecture started to make its mark in the city (Gündoğdu, 2010; İsmailhakkıoğlu, 2007; Küçük, 1976; Üstüner Çelik, 2011).

In the city, conquered by the Ottoman Empire in 1514, development activities commenced during the reign of Suleiman the Magnificent. After these development activities, Erzurum became more relevant and diverse. Having been home to Roman, Byzantian, Seljuk, and Ottoman civilisations, Erzurum is rich in historical artefacts. Indeed, the hammams built during the Ottoman era stand out (Çınar, 2011; 2012; Gündoğdu, 2010; Karpuz, 1979). In Erzurum, there are 13 hammams built during the Ottoman era that have remained intact (Özkan, 2007) (Fig. 2).



Fig. 2 Locations of Ottoman Period hammams in Erzurum

The examples of Ottoman era hammams in Erzurum, which enrich the historical scene of the city, are Lala Mustafa Pasha Hammam, Kırkçeşme Hammam, Küçük Hammam, Askeri Hammam, Boyahane Hammam, Murat Pasha Hammam, Erzurum (Pastırmacı-Fuadiye) Hammam, Hanım Hammam, Çifte Göbek Hammam, Tahta Hammam, Şehyler Hammam, and Saray Hammam. The thirteen hammams in Erzurum are briefly detailed in Fig. 3 (Aydın, 2014; Çınar, 2010; Erzurum İl Kültür ve Turizm Müdürlüğü, 2022; Köşklü and Çınar, 2011; Küçükuğurlu and Kayserili, 2020; Özkan; 2010; Yurttaş et al., 2008; Zaman et al., 2018). The photos of hammams belong to the personal archive of the authors. In Section 2.1, the spatial features, namely the function, spatial arrangement, and ornamental elements of these hammams are examined.

2.1 Spatial analysis of Turkish hammams in Erzurum

Erzurum is an important province that was home to many civilisations throughout history. The architectural works built by past civilisations have been successfully preserved until today. Among the most important of these structures are hammams built during the Ottoman Empire, now part of daily life in the city. Thirteen Ottoman hammams in the city were examined within the scope of the study. Among the examined hammams, Boyahane, Çifte Göbek, Erzurum (Fuadiye-Pastırmacı), Hanım, Kırkçeşme, Küçük (Small), Murat Pasha, Lala Mustafa Pasha, Tahta and Saray Hammams are still operational. Askeri Hammam, on the other hand, has been restored and underwent a change in function. The spatial analyses of the hammams focused on the dimensions of function, spatial arrangement, plan types, and ornamental elements:

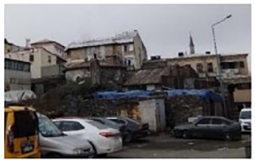
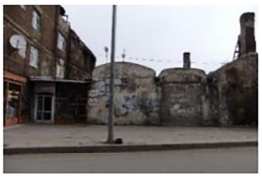
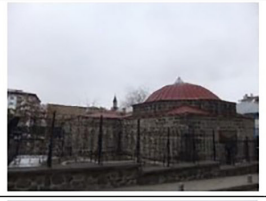
Photos of the Hammams	Information of the Hammams	Photos of the Hammams	Information of the Hammams
	**Lala Mustafa Paşa Hammam (Çöplük Hamamı):** It is located outside the Tabriz Gate and is it was built in the 12th century (Çınar, 2010). It has the classical Ottoman Period plan typology. The building extending in the north-south direction is the only hammam (Yurtaş et al., 2008). The Lala Mustafa Pasha Hammam underwent a major renovation in 1988 (Çınar, 2010).		**Hanım Hammam (Numune Hamamı):** It is located in the Esat Pasha neighborhood and is known to have been built by Mrs. Raziye. The date of construction of the structure is 17-18th century (Yurtaş et al., 2008). Restoration work on the structure began in 2019. Currently, studies are ongoing (Küçükuğurlu and Kayserili, 2020).
	**Kırkçeşme Hammam:** It is located in the Kırkçeşme neighborhood. When evaluated within the scope of plans and architectural features, It has been dated to the 18th century (Çınar, 2010) The building is also known as the Rustem Pasha Hammam. It underwent a repair in 1940 (Küçükuğurlu and Kayserili, 2020).		**Çifte Göbek Hammam:** It is located in the Neğenağa Neighborhood and does not have an inscription (Çınar, 2011). The date of construction of the structure is known as 18th century. (Yurtaş et al., 2008). It is known that the building underwent a major repair in 1902 (Küçükuğurlu and Kayserili, 2020).
	**Küçük Hammam**: It is located in the Ali Pasha neighborhood. There is no inscription in the structure. It is believed that it was built in the 18th century. It is known that Kuyucu Murat Pasha has a foundation (Çınar, 2010).		**Gümrük Hammam:** The building is located in Eminkurbu district. It is a single-function hammam built in the first half of the 18th century (Çınar, 2012). The hammam underwent restoration between 2005 and 2006. Currently, the building that retains the function of a hammam is closed for use (Küçükugurlu and Kayserili, 2020).
	**Askeri Hammam:** It is located in the Yoncalık district. Because of its architectural features, it has been dated to the 18th century (Köşklü and Çınar, 2011). Since the building remained under the supervision of the military until 1982, its name remained a Askeri Hammam (Yurtaş et al., 2008). The Askeri Hammam is currently used as a library as a result of a change in function (Küçükuğurlu and Kayserili, 2020).		**Tahta Hammam:** It is building located in the Kadana neighborhood. (Erzurum İl Kültür ve Turizm Müdürlüğü, 2022). It is a single-function hammam dated to the 18th century (Çınar, 2010). It is known that the structure underwent a major repair in 1988. Nowadays, it maintains its function to hammam (Küçükuğurlu and Kayserili, 2020).
	**Boyahane Hammam:** It is located in the Boyahane district, it was built by Governor Emin Pasha in 1566 (Aydın, 2014). The hammam underwent repairs between 1968 and 1987. Although it is thought that a change in function will be made in this process, it has continued to be used as a hammam today (Küçükuğurlu and Kayserili, 2020).		**Şeyhler Hammam:** The Şeyhler Hammam is located in the Şeyhler Neighborhood, opposite the Şeyhler Mosque. It is one of the examples that has preserved its properties in the hammams in Erzurum (Özkan, 2010). Currently, it is used as a Library of Writing Works (Küçükuğurlu and Kayserili, 2020).
	**Murat Pasha Hammam:** It is located in the Murat Pasha neighborhood. It is known that it was built in the 18th century (Zaman et al., 2018). It was restored in 1996 (Çınar, 2010).		**Saray Hammam:** It is located in the neighborhood of Emir Sheikh. The date of construction is 18th century in the located of records. (Çınar, 2010). The structure was restored 2006 and 2007. The structure that retains its function is currently in use (Küçükuğurlu and Kayserili, 2020).
	**Erzurum (Pastırmacı-Fuadiye) Hammam:** It is located in the Çortan neighboord in the Gürcükapı district. There is no inscription in the structure, but it is known that it was built in the 18th century (Çınar, 2010). It is known that the structure underwent repairs in 1957. It is currently used as a hammam (Küçükuğurlu and Kayserili, 2020).		

Fig. 3 General information and photos of the hammams (Aydın, 2014; Çınar, 2010; Erzurum İl Kültür ve Turizm Müdürlüğü, 2022; Köşklü and Çınar, 2011; Küçükuğurlu and Kayserili, 2020; Özkan; 2010; Yurttaş et al., 2008; Zaman et al., 2018)

1. *Lala Mustafa Pasha Hammam*: This single hammam has a rectangular floor plan. It consists of a dressing room, a warm room, a hot room, and a furnace. Regarding its plan typology, this is a hammam with halvets arranged around a square-shaped hot room (Type C). On the top of the dressing room is a dome placed on squinches. The dressing room leads to the warm room, which has a rectangular floor plan and a dome with a bright lantern. This room leads to the hot room. The middle of the hot room is covered with a dome. In the hot room, there are three halvets, all of which are also covered

with a dome. The halvets have a square floor plan. A furnace is right behind the hot room, which can be accessed from outside. The hammam was built using cut stone and rubble and repaired at different intervals. The marble coatings of the hammam were renewed in 1985 (Çobanoğlu, 2003) (Fig. 4).

2. *Kırkçeşme Hammam*: The hammam was initially built to be a single hammam; however, in time, as a result of the renovations it has undergone, it has become a double hammam (Çınar, 2010). In this study, the hammam was evaluated as a single hammam in accordance with its original function. The Kırkçeşme Hammam consists of a dressing room, a warm room, a hot room, and a furnace. However, the location of the furnace could not be pinpointed in the floor plan obtained. In terms of its typology, this is a hammam with a cross-axial hot room with four corner halvets (Type A). The entrance of the hammam is located in the dressing room, which has a rectangular floor plan and two floors. There is an ornamental pool right in the middle of the room. The dressing room is covered with an octagonal dome. The dressing room leads to the warm room. The warm room is relatively smaller than other rooms and covered with a dome. In the middle of the room is a shadirvan. The warm room leads to the hot room. A dome is used on the middle top of the room, as well as on top of the halvets. In the hot room are four iwans. One of the iwans serves as the entrance point. Halvets are located on both sides of the iwans, and in the middle is a navel stone. This hammam was constructed using cut stone and rubble (Fig. 5).
3. *Küçük Hammam*: This single hammam consists of a dressing room, a warm room, a hot room, and a furnace. As no drawings of the furnace were



Fig. 4 Plan scheme and space arrangement of Lala Mustafa Pasha Hammam

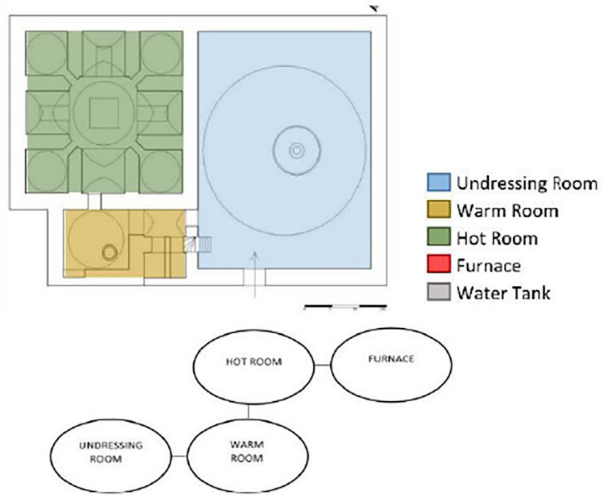


Fig. 5 Plan scheme and space arrangement of Kırkçeşme Hammam

available in the floor plan of the hammam, it could not be presented. Çınar (2010) stated that the hammam has lost its original appearance and undergone many repairs. Therefore, it was not possible to classify the plan type according to the hot room of the hammam. The dressing room, the first room of the hammam, consists of two separate sections. Of the two, the first is a large dressing room, in the middle of which is an ornamental pool. This room was covered with a dome. This dome was built on an octagonal pulley and elevated by a second pulley. To the west of the large dressing room is a second, smaller dressing room. The warm room is accessed from the east of the larger dressing room. The warm room is covered by three domes and leads to the hot room, which has a square floor plan with a navel stone in the middle and is covered with a dome. In this hammam, the hot room is relatively small compared to other areas. This hammam was constructed using rubble and cut stone (Fig. 6).

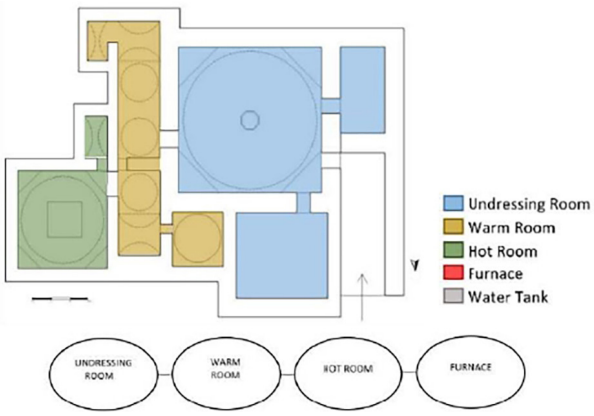


Fig. 6 Plan scheme and space arrangement of Küçük Hammam

4. *Askeri Hammam*: A single hammam consisting of a dressing room, warm room, hot room, and a furnace. In terms of its typology, this is a hammam with a cross-axial hot room with four corner halvets (Type A). The dressing room of the hammam has a rectangular floor plan. The structure is covered with a dome placed on squinches. The dressing room leads to the warm room. The warm room, too, has a rectangular floor plan, although it is smaller. The warm room leads to the hot room, in the middle of which is a navel stone. In the hot room are four iwans, one of which is used as the entrance point, and there are halvets on both sides of the iwans. Each halvet is covered with a dome. Just like the dressing room, the hot room is also covered with a dome placed on squinches. This hammam was constructed using stone (Fig. 7).
5. *Boyahane Hammam*: This is a double hammam with a cross-axial hot room with four corner halvets (Type A). It consists of a dressing room, warm room, hot room, and a furnace. The structure's floor plan included a representation of a water tank right in front of the furnace, extending across the hot rooms. The women's dressing room has been converted into a mosque (Çınar, 2010). The hammam entrance is located in the dressing room. The dressing room has a square floor plan covered with a dome. The middle of the dressing room was left empty, and rooms were placed along the edges. The entrance of the warm room is located to the south of the dressing room. The warm room structure of this hammam is relatively different: the room entered from the dressing room is the first warm room and has a rectangular floor plan. To the south of this room is the entrance to the second warm room, which is covered with three domes. The second warm room leads to the hot room. In the middle of the hot room is a round navel stone. This room is covered with a dome and has four iwans, on both sides of which are halvets. The halvets have an octagonal floor plan. The drawings show there was only one warm room in the women's section of the hammam, which was covered with three domes. The warm room led to the hot room. The women's hot room is identical to the men's, with the only difference being that the novel stone was square instead of round. This hammam was constructed using cut stone (Fig. 8).
6. *Murat Pasha Hammam*: A single hammam consisting of a dressing room, warm room, hot room, and a furnace. Its typology is a hammam with a cross-axial hot room with four corner halvets (Type A). The dressing room of the hammam has a square floor plan and is covered with a dome with two pulleys. Part of the dome below the pulleys is octagonal, while its upper part is round. There is an ornamental pool in the middle of the dressing room. The dressing room leads to the warm room, which has a rectangular floor plan and is covered with three domes. The warm room leads to the hot room, in the middle of which is an octagonal navel stone. This room is covered by a large dome, where muqarnas was used as a transition element. There are four iwans in the hot room, of which one serves as an entrance point. Four halvets are located between the iwans. Each halvet is covered with a dome. This hammam was built using rubble and cut stone (Fig. 9).
7. *Erzurum (Pastırmacı-Fuadiye) Hammam*: This single hammam consists of a dressing room, warm room, hot room, and a furnace. This is a hammam with halvets

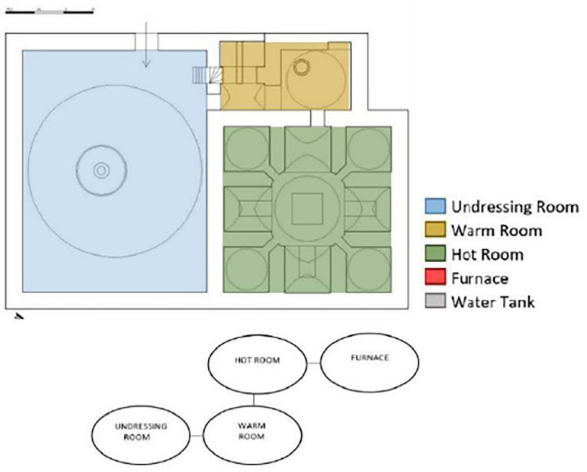


Fig. 7 Plan scheme and space arrangement of Askeri Hammam

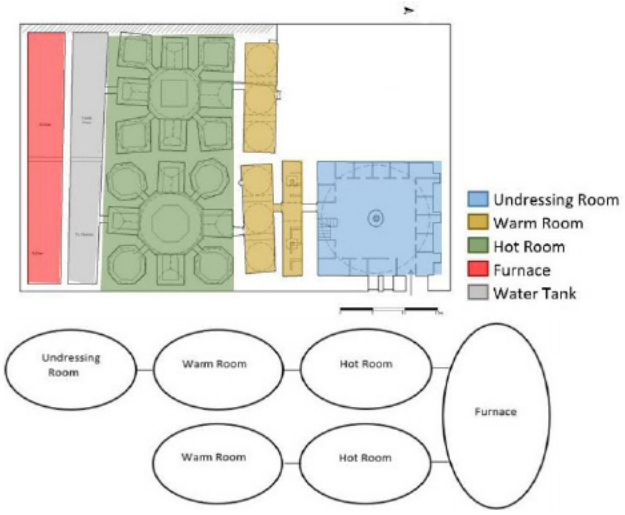


Fig. 8 Plan scheme and space arrangement of Boyahane Hammam

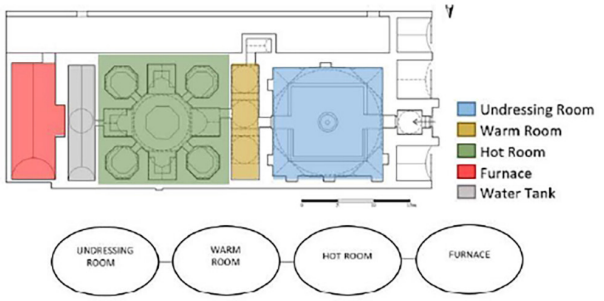


Fig. 9 Plan scheme and space arrangement of Murat Pasha Hammam

arranged around a square-shaped hot room (Type C). The entrance of the hammam is located in the dressing room. The dressing room has a square floor plan, in the middle of which are eight wooden pillars. These pillars carry the octagonal dome that serves as the upper cover. Also, in the space created by the pillars is an ornamental pool. There is a staircase to the west of the dressing room, which leads to the upper floors of the area. The second floor is also a dressing room, and on the third floor is a balcony. On the wall where the staircase is located, a door opens to the rectangular warm room. In this room, there are tile decorations. The warm room leads to the hot room through an iwan. The hot room has a square floor plan, the upper middle of which is covered with a dome; there are eight halvets in the hot room. The hammam was built using rubble and cut stone (Fig. 10).

8. *Hanım Hammam*: This single hammam consists of a dressing room, warm room, hot room, and a furnace. Since the structure has a unique hot room plan, it could not be included in any typology. The dressing room has a rectangular floor plan with an ornamental pool in the middle. This area is covered with a dome. To the north of the dressing room is a second dressing room that has a rectangular floor plan. The dressing room leads to the rectangular warm room that leads to the hot room. The hot room has an octagonal floor plan and is covered with a dome with an octagonal navel stone in the middle. There are also two octagonal halvet chambers in the hot room, which are also covered with domes. This hammam was built using rubble and cut stone (Fig. 11).
9. *Çift Göbek Hammam*: This single hammam consists of a dressing room, warm room, hot room, and a furnace. The plan type of the structure could not be classified because the hot room of the hammam has a unique design. The dressing room has a rectangular floor plan and is covered with a dome and a central ornamental pool. The door to the south of the dressing room leads to the warm room, which has a rectangular floor plan and is covered by two domes of equal size. The hot room differs from other hammams in Erzurum and other provinces nearby because it has two naval stones covered by two domes. The floor plan of the hot room is quasi-rectangular. The long side of the rectangular room was divided into two, and a navel stone was placed on both sides, which were covered by equal-size domes consisting of octagonal pulleys. In this room, to the north and south of the naval stones, are three halvets. These halvets are also covered by domes. This hammam was constructed using rubble and cut stone (Fig. 12).
10. *Gümrük Hammam*: This single hammam consists of a dressing room, warm room, hot room, and a furnace. In terms of its typology, this is a hammam with a cross-axial hot room with four corner halvets (Type A) (Çınar, 2010). However, due to the repairs it has undergone, today it looks more like

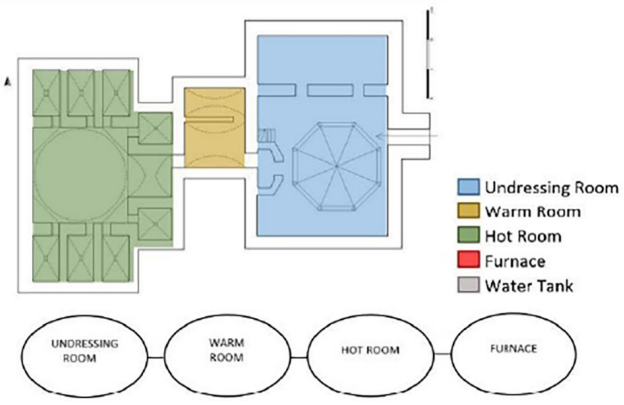


Fig. 10 Plan scheme and space arrangement of Erzurum (Pastırmacı-Fuadiye) Hammam

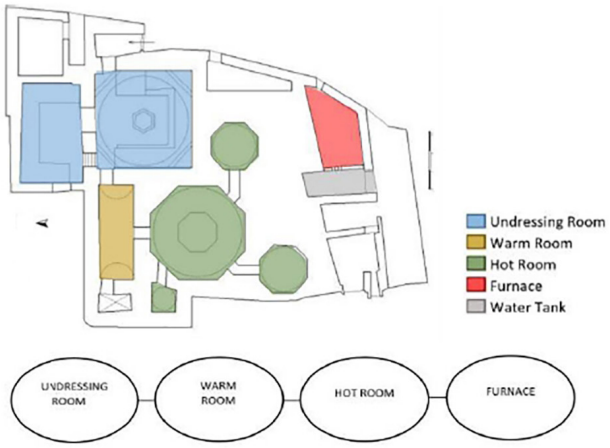


Fig. 11 Plan scheme and space arrangement of Hanım Hammam

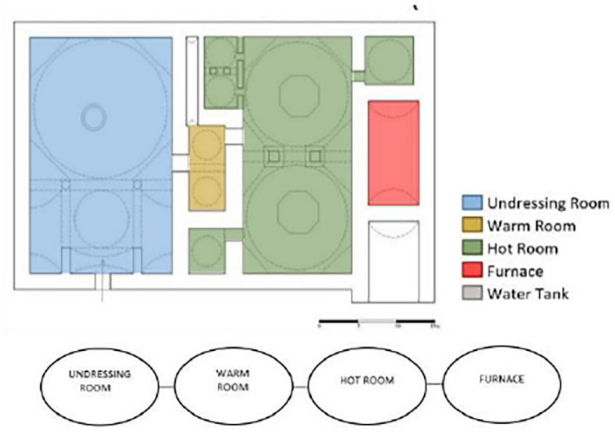


Fig. 12 Plan scheme and space arrangement of Çift Göbek Hammam

a Type C Hammam with Halvets arranged around a square-shaped hot room. The dressing room has a square floor plan covered by a dome, with an ornamental pool in the middle. The dressing room leads to the warm room with a rectangular floor plan. In the upper middle of this room is a dome, the sides of which are covered with cross vaults. The warm room leads to the hot room, where there is a naval stone covered by a dome. On three sides of the navel stone are iwans with cross vaults, and on both sides of the iwans are halvets covered with a dome. Rubble and cut stone were used to construct the hammam (Fig. 13).

11. *Tahta Hammam*: This single hammam consists of a dressing room, warm room, hot room, and a furnace. The plan type of the hammam could not be classified. The dressing room of the hammam has a square floor plan. The original building was covered with a dome (Çınar, 2010); however, today, the building is covered with a wooden cover carried by wooden columns. The dressing room leads to the quasi-rectangular warm room, which is covered with vaults. A door to the east of this room leads to a rectangular hot room. In the barrel-vaulted hot room is an octagonal navel stone. There is only one halvet in the hot room. The hammam was constructed using cut stone and rubble (Fig. 14).
12. *Şeyhler Hammam*: This single hammam consists of a dressing room, warm room, hot room, and a furnace. In terms of its typology, this is a hammam with a cross-axial hot room with four corner halvets (Type A). The dressing room has a square floor plan and is covered with a dome, with an ornamental pool in the middle. A door west of the dressing room leads to the rectangular warm room covered with three domes of equal size. The warm room leads to the hot room, consisting of four iwans, with halvets on both sides of the iwans and a central octagonal naval stone. One of the iwans serves as an entry point. The iwans are covered with cross vaults. The halvets are octagonal and covered with a dome (Fig. 15).
13. *Saray Hammam*: This single hammam consists of a dressing room, warm room, hot room, and a furnace. The plan type of the structure could not be classified. The dressing room has a square floor plan and is covered with a dome, with an ornamental pool in the middle. The large dressing

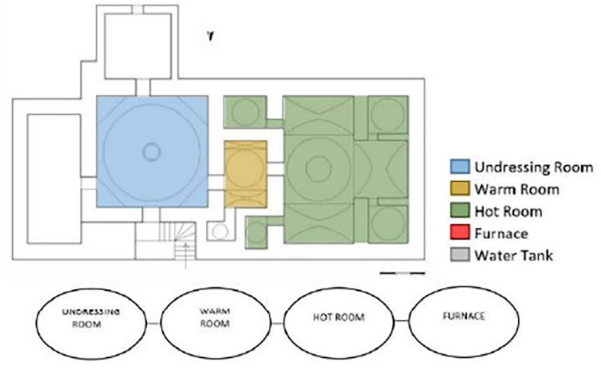


Fig. 13 Plan scheme and space arrangement of Gümrük Hammam

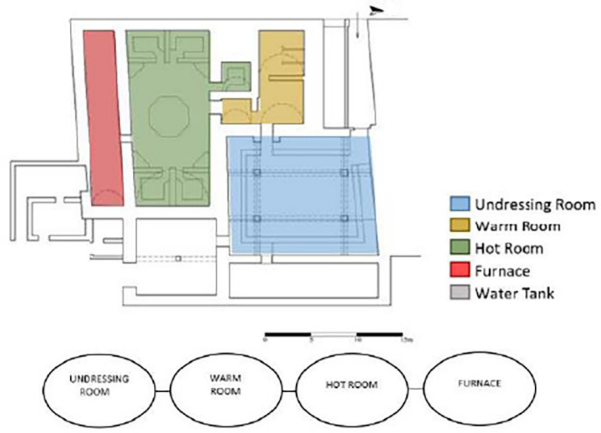


Fig. 14 Plan scheme and space arrangement of Tahta Hammam

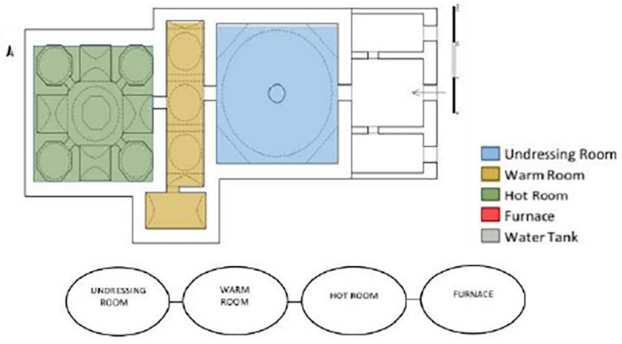


Fig. 15 Plan scheme and space arrangement of Şeyhler Hammam

room leads to a second dressing room located west of the main dressing room. This additional room has a rectangular floor plan and is covered by two domes. The dressing room leads to the warm room, which has a rectangular floor plan and is covered with two domes of equal size. A hall located in the northeast of the warm room leads to another square room, which is a part of the warm area and covered with a dome. The rectangular warm room leads to the square hot room. In the middle of the hot room is a navel stone covered by a dome, in addition to the three halvet chambers covered with a dome located to the north and west. The hammam was built using rubble and cut stone (Fig. 16).

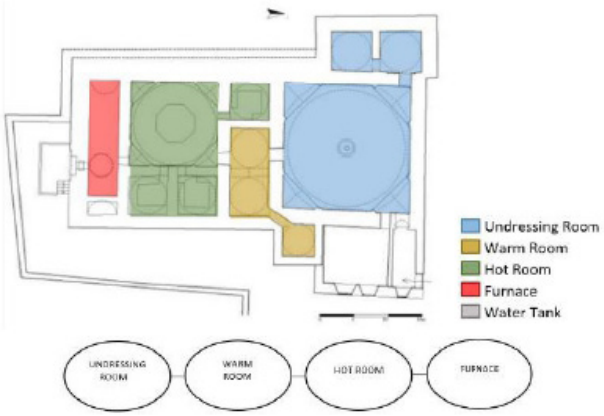


Fig. 16 Plan scheme and space arrangement of Saray Hammam

Table 1 Restored/repaired dates of Erzurum hammam buildings, their current functions

Hammams	Restored/repaired date	Today's function
Lala Mustafa Pasha Hammam	1984	Hammam
Kırkcesme Hammam	1940	Hammam
Küçük Hammam	–	Hammam
Askeri Hammam	2006	Library
Boyahane Hammam	1968-1987	Hammam
Murat Pasha Hammam	1996	Hammam
Erzurum (Pastırmacı-Fuadiye) Hammam	1957	Hammam
Hanım Hammam	2019 – in progress	Hammam
Çifte Göbek Hammam	1902	Hammam
Gümrük Hammam	2005–2006	Not used
Tahta Hammam	1988	Hammam
Şeyhler Hammam	2013	Manuscripts Library
Saray Hammam	2006–2007	Hammam

3 Conclusion

Erzurum has a vibrant history inheriting many historical structures belonging to different societies that have survived until today. The Ottoman-era hammams, which stand out among these structures, were examined as a part of this study. The examined hammams were first introduced with their locations and histories. Only two of Erzurum's hammams have undergone a function change, namely Askeri Hammam and Şeyhler Hammam. Although Gümrük Hammam continues to preserve its function, it is no longer operational. On the other hand, other hammams still operate as previously (Table 1).

The functions of the structures, their spatial arrangement, and plan types were examined. The spatial arrangement of all these hammams included a dressing room, warm room, hot room, and a furnace, just as in the Ottoman era. The function and typology characteristics of the hammams are summarised in Table 2.

Among the bath structures, only the Boyahane Bath was designed to have a double function. However, today, it serves as a single hammam; the women's section was re-functionalised as a mosque. Conversly, some originally single hammams serve as double hammams today. On reveiwing the typologies of the hammams in Erzurum, four hammams with a cross-axial hot room with four corner halvets (Type A) and two hammams with halvets arranged around a square-shaped hot room (Type C) were identified. Although Gümrük Hammam was originally a Type A hammam, due to the repairs it has undergone, it has become a Type C hammam. In addition, four bath structures could not be classified within the scope of plan typology. Also, four hammams could not be classified in terms of their typology: Hanım Hammam and Çifte Göbek Hammam stood out as examples with unique hot room designs. Tahta Hammam and Saray Hammam are other examples of hammams that could not be classified. So, four hammams could not be identified as any type (Table 2).

Tahta Hammam was found to be originally covered by a dome; however, today, the structure is covered with a flat wooden material. It was not determined in which part of the hammam the original dome was used in its current form. Accordingly, Table 2 shows the most recent data on the use of domes in the structure. All hammams examined except for Tahta Hammam have domes. While Erzurum (Pastırmacı-Fuadiye) Hammam and Hanım Hammam did not use domes in the warm room, they have domes covering the dressing and hot rooms. The other remaining hammams have domes in their dressing, warm, and hot rooms. The number of ornamental elements in hammams in Erzurum is very few. Only in Erzurum

Table 2 Classification of function and plan typology and examination of decorative elements of Erzurum Ottoman period hammams

Hammams	Function		Plan typology						Dome usage			Ornamental pool	Ornament elements
	S.	D.	A	B	C	D	E	F	Dressing room	Warm room	Hot room		
Lala Mustafa Pasha Hammam	+				+				+	+	+	–	–
Kırkcesme Hammam	+								+	+	+	+	–
Küçük Hammam	+								+	+	+	+	–
Askeri Hammam	+		+						+	+	+	–	–
Boyahane Hammam		+	+						+	+	+	–	–
Murat Pasha Hammam	+		+						+	+	+	+	–
Erzurum (Pastırmacı-Fuadiye) Hammam	+				+				+	–	+	+	tile
Hanım Hammam	+								+	–	+	+	–
Çifte Göbek Hammam	+								+	+	+	+	–
Gümrük Hammam	+		+		+				+	+	+	+	–
Tahta Hammam	+								–	–	–	–	–
Şeyhler Hammam	+		+						+	+	+	+	–
Saray Hammam	+								+	+	+	+	–

(Pastırmacı-Fuadiye) Hammam were tiles and other ornamental elements used. No ornamental elements were observed in other hammams while visiting them or in the literature review. However, ornamental pools were a popular choice for the dressing rooms of hammams.

As a result of the examination of the Ottoman-era hammams in Erzurum, it was found that:

- Among the hammams examined, 12 were found to be single hammams, and one was a double hammam.
- The Ottoman-era hammams in Erzurum were found to conform with two typologies identified in the literature: Type A Hammams with a cross-axial hot room with four corner halvets, and Type C Hammams with halvets arranged around a square-shaped hot room. Among the examined hammams, four were found to be Type A, while three were found to be type C.
- Four of the examined hammams are unique in their hot room structure and, therefore, could not be classified.
- Domes, an element frequently utilised in Ottoman-era hammams, were also used in Ottoman hammams in Erzurum.

In one of the examined hammams, it is known that there were domes in the original architecture, but since the dome was removed, it is not known which part of the hammam the dome was used.

In ten of the examined hammams, domes were used in the dressing room, warm room, and hot room, whereas in two hammams, domes were used in the dressing room and the hot room:

- The only ornamental element used in Ottoman hammams in Erzurum is the ornamental pool.
- An ornamental pool was placed in the dressing room of nine examined hammams; in only one, a different ornamental element, tiles, were used.
- Ottoman-era hammams were found to be predominantly single hammams.
- However, no architectural unity was observed regarding the plan typologies of the hammams.
- Domes, a prominent element of the Ottoman-era hammams, were also used in the hammams built in Erzurum.
- The most preferred ornamental element in hammams is the ornamental pool placed in dressing rooms.

In light of these findings, the following can be inferred:

- There is an architectural unity between the examined hammams in terms of spatial arrangement.
- There is no unity between the examined hammams and plan typology.
- The prominent common feature of the examined hammams is the use of domes.
- The prominent ornamental element used in the examined hammams is ornamental pools.

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