Water Architectures in the Ottoman Empire, Examples from Antalya

By Hacer Mutlu Danaci & Ceren Özata

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Keywords: water structure, architecture, ottoman, antalya.

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Water Architectures in the Ottoman Empire, Examples from Antalya

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Abstract - In the historical process, water structures have been developed in every period. In the Ottoman era, examples of water structures were constructed in accordance with the increasing political and economic power of the state. These developments are not simultaneous in Istanbul and in Anatolia. The classical style of Ottoman architecture that uses function and decoration in a balanced way is also seen in Anatolian water structures. Before Ottoman domination, Antalya, which is located on the southwest of Anatolia, was under the control of the Romans, Byzantines, Anatolian Seljuks, Cypriot states and the Principalities of Tekke and Hamidids. This study will provide an analysis of exemplary evidence on water structures in the Ottoman period in the historical process in Rumelia and Anatolia and some examples of water structures in Antalya.

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I. Introduction

People have settled near water sources throughout history. Inhabitable areas expanded once people learned how to bring water to remote settlements. Civilisations constructed a variety of water structures in order to benefit from its functions and enjoy its aesthetic properties. Elements of water architecture found in Anatolia and Rumelia has been functional in almost all periods in history. Reservoirs used to store the transport water were also used for different functional purposes due to the difficulty of moving and collecting water. Due to the influences of Islam in this territory, the use of water gained popularity through public fountains and sebils that were mostly constructed with charitable intentions. For example, shadirvans gradually became an integral part of mosques where people did their ritual ablutions.

Water architecture in the Ottoman Empire Era also has an important role in daily life due to cultural and religious reasons. Although with some variation, there are many water structures in Anatolia and Rumelia. Located on the south of Anatolia, Antalya Province is home to several valuable water structures from the Ottoman Period, of which some are still non-existent in literature. This study will analyse water structures from the Ottoman period in Rumelia and Anatolia and some examples of water structures in Antalya Province from the same period.

II. Ottoman Era Water Architecture

Preceded by the Roman and Byzantine Empires, the Ottoman Empire is the third and last empire in the Mediterranean world. Back then, the Mediterranean region was regarded as a centre of development of civilisation (Ortaylı, 2003). The transport and provision of water was regarded as one of the most important issues in Ottoman urban technology. The quality of water structures was always at highest standards (Cerasi, 2001). Parallel to the development of the Ottoman state's political and economic power as of the 16th century, it became possible to use larger amounts of expensive lead which granted new opportunities in hydraulic engineering. Lead is effective in water insulation, practical to mould and shape, while worn parts can be smelted and reused. Such properties of lead quickly made it more popular than clay pipes. Consequently, the stone water reservoirs seen in water fountains from the Seljuk Era were no longer needed. However, more traditional techniques, materials and forms remained in use in Anatolian settlements outside of Istanbul. 15th century fountains generally comprised of a vaulted or domed water reservoir with a rather deep niche housing the tap on one side. There were also fountains covered with a wooden cornice. Beginning in the 16th century, the classical style of Ottoman architecture integrated function and adornment in a balanced way and this gradually started to emerge in Anatolian drinking fountains in form, technique or detail (Önge, 1997).

During the region of Mehmed II [the Conqueror] a comprehensive repair and development project commenced on the 130 km-long “Halkalı” water supply system, which is first of the three systems that provided water to the Rumelian [European] side of Istanbul. The second largest water supply system designed by Sinan the Architect was “Süleymaniye”. Similarly, the “Kırk Çeşme [Forty Fountains]” water supply system in Istanbul is worth noting as it still remains in use today. Having also been employed in the construction of water supply systems of cities like Pompeii in the Roman Empire, water gauges were most extensively used in Ottoman water supply systems. The upward growth of large cities in the 19th century required pressurised public water supply systems to provide water to taller buildings (Kratilir, 1995).

Drinking Fountains are a prevalent form of water structure in the Ottoman Period. In addition to the existing fountain types, a new fountain style starts to appear in 16th century which features twirling spout taps on the exterior or interior facades with some of them
having cavities to place water urns on the mirror stone. Various forms included: plaza fountains consisting of twirling spout taps installed on the facades of detached cisterns; fountains installed on the exterior or interior of buildings of various functions for the sole aim of providing drinking water; kerb fountains consisting either of a console shaped small basin with sprinkler or a small mirror stone with a twirling spout tap that pours water in to a small carved basin; shadirvan kerb fountains consisting of only a small carved basin installed on the side of pools/ponds; and, namazgah fountains located on one façade of the namazgah buildings. The 18th century saw the appearance of small quay drinking fountains, generally along the shoreline of the Bosporus and Golden Horn in Istanbul for the benefit of fishermen and other seafarers in small vessels. By the end of the 19th century, original fountains were replaced by a sink installed with a tap and double volans. A good example is the sink inside Yıldız Palace made of white ceramic. Towards the end of the 19th century, following the legacy of the Baýlan family, the famous Ottoman court architects, masters of Anatolian Greek and Armenian origin started to come into prominence in civilian architecture, particularly imperial architecture (Kıratlılar, 1997).

As with other structures of water architecture, major developments took place under Ottoman influence in sebils after the 15th century. In terms of architectural development, it is possible to say that starting in the 15th century Seljuk period sebils, in the form of a niched cistern installed on the walls of buildings, evolved into larger sebilhanes featuring sizable windows that opened out. Examples include Istanbul’s first sebil, the Sebil of Efdalzade Seyyid Hamideddin built in the Fatih district in 1496, and the Topkapı Tekkeci İbrahim Agha sebil built in 1593. During the 16th century, sebils are usually seen integrated into civil architecture structures like palaces, mansions and pavilions. Towards the end of the 17th century changes start to take place in the polygonal plans of sebilhanes or consoles with the impact of the baroque rococo style. New structures featured curves and ornamentation alongside sharp corners and uniform facades. Such examples include the Sebil of Amcazade Hüseyin Pasha (c.1697) located in the Saracoğlu Külliye (Social Complex) and the Sebil of Emin Agha in Dolmabahçe (c. 1740). Starting in the mid-17th century until the end of the 19th century, very diverse types of sebilhanes appeared in the Ottoman capital Istanbul with the abundance of water supplied to the city, largely owed to economic development and prosperity. The 19th century saw the appearance of sebil facades or plaza sebils, generally formed of sebil windows installed on the corners. Having said that, besides various architectural features, traditional sebil architecture survived in Istanbul and, in particular, Anatolia (Önge, 1997).

Mostly made using white marble, Selsebils (ornamental cascading fountains) consisted of small basins of varying shapes at different levels that were fixed symmetrically on a large mirror stone as a main console, nestled on a wall or inside a niche that was bordered by raised motifs and affluenty decorated profiles. Water rills from the upper-most outlet or small basin to the basins below before finally reaching a small pool on the ground. One of the most beautiful examples of such garden sebils is located in the garden of Muhsinzade Yalısı, a waterside Istanbul mansion built in the 19th century. The selsebil found in the 19th century Konya Mawlanâ Islamic Monastery is much more modest compared to these examples. Inclined selsebils can be found inside the windows of the Sünnet Mansion of the Topkapı Palace in Istanbul can be found in traditional Ottoman structures like Yali Mansion, Tersane Palace and Has Oda Pavilion. Today, most of the selsebils in Istanbul date to the 18th and 19th centuries (Önge, 1997).

The term shadirvan is generally used to describe the raised sided pools with ritual ablution taps on either side, found frequently on the interior or exterior walls, or in the central courtyard of Anatolian mosques. The first example of a shadirvan of this nature is thought to be the one constructed in the inner courtyard of the Fatih Mosque in Istanbul (c. 1470). Similar to fountains, the shadirvan pools in mosque courtyards start to feature twirling spouts around the mid-16th century. A few of the original twirling spouts can be found in some Anatolian villages and towns; for example, the shadirvan at the 16th century zawiyah at Abdul Hasan Village in Taşköprü. An example of a non-twirling, classical type spouted shadirvan is found at Lala Hüseyin Pasha Mosque in Kütahya (c. 1568). Classical Ottoman shadirvans more often have circular plans and prefer to use goblet shaped navel basins. Ornamentation can be seen on the exteriors of shadirvans that were built after the 15th century. Examples of barriers covering the sides and top of shadirvan pools intended to prevent contact with water and disposal of coins also appear in this century. This is also when wooden shelters resting on columns around the pool appear in mosque courtyards aiming to protect people performing ritual ablution from the sun or rain. One of the earliest examples of such shadirvan covers is again found in Istanbul’s Fatih Mosque. 16th century is the period when mosque shadirvans reach their pinnacle in terms of architectural constitution and function. There are also water aeration facilities known as water mansions or enclosed shadirvans that resemble classical mosque shadirvans, but lack ablution taps on the sides of the pools. The shadirvan pool at the Manisa Hafız Hatun Mosque
(c. 1522) has a circular plan with an approximate diameter of 5.50 m and an approximate height of 1.10 m. Beginning at the end of the 18th century, shadirvans gradually start lose their architectural character, get smaller and even start to disappear. The shadirvans at Laleli Mosque (c. 1763), Eyüp Sultan Mosque (c. 1800), Nusretiye Mosque (c. 1826) have a weakly founded architectural structure. The shadirvans at Dolmabahçe and Ortaköy Mosques (both c. 1853) and Yıldız Hamidiye Mosque (c. 1886) are no longer visible (Önge, 1997).

### III. Ottoman Era Water Architecture, Antalya

Antalya Province is a touristic city situated on the Mediterranean coast in the Mediterranean Region, in South Turkey (Figure 1). It is encircled by the provinces of Burdur, Isparta and Konya to the north, Karaman and Mersin to the east and Muğla to the west. The Mediterranean Sea is to the south. Antalya, meaning “home of Attalus” is believed to have been founded by King Attalus II. After the demise of the Kingdom of Pergamum (133 BCE) the city briefly enjoyed independence before falling to pirates. It was annexed to the Roman empire by Commander Servilius Sauriacus in 77 BCE. In 67 BCE the city became the naval base of Pompeius’ fleet. Hadrianus’ visit to Attaleia in 130 CE contributed to the development of the city. During the reign of the Byzantines the city was listed an episcopate.

Both situated within the borders of Antalya Province, Kaleiçi historic quarter and Elmalı District is home to structures from the Ottoman era. This study examines some of these which feature water elements. Thought have been built between 1607-1616, Tekeli Mehmet Pasha Mosque is located in the Kaleiçi historic quarter of Antalya Province. The minaret is located on the north-western corner of the mosque while the shadirvan lies to the east (Kılıç, 2013). Today, the shadirvan is used for ritual ablution (Figure 2).

Murat Pasha Mosque was commissioned by Murat Pasha and was built between 1570-1571 and is near the Kaleiçi historic quarter. The shadirvan is located to the north of the courtyard, on the axis of the main entrance. Featuring an octagonal plan, the shadirvan has a reservoir in the middle. The octagonal shaped marble clad reservoir has taps on its facades. The shadirvan which features the characteristics of the period has a conical cover supported by eight marble columns with stalactite capitals (Kılıç, 2013) (Figure 2).

Ketenci Ömer Pasha Mosque stands out as the largest mosque and monumental structure of Antalya’s Elmalı District. The structure which is a notable example of classical Ottoman architecture was renovated by the General Directorate of Foundations twice, in 1938 and 1968 (TVAEE, 1983). As with similar examples, the shadirvan seen adjacent to the mosque is for ritual ablutions (Figure 2).

Constructed using stone, the shadirvan has an octagonal plan and features a pool in the middle. The exterior of the pool has 16 cusps. Each façade has been separated into rectangular panels with embedded pillars. There is an ablution tap in the centre of each of these panels. The reservoir/ is set in motion with triple-tiered moulds. There are two rows of kaval moulds at the bottom and three rows of concave moulds above and at the ends of the reservoir. 16 pillars support the flat dome that covers the pool. The shadirvan has a conical cover.

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**Figure 1:** Location of Antalya, Emali District and Kaleiçi historic urban quarter

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standing on eight reinforced concrete piers that are
reinforced by Bursa style arches (Kılıç, 2013).

Constructed in the second half of the 14th
century, the Nazır Hamam in Antalya Kaleiçi bears a lot
of resemblance to the plan of the Bali Bey Hamam.
Adjacent to the wall on the northern façade, the building
has a rectangular plan of approximately 9.50 x 2.50 m
that extends on the southwest-northeast axis. An
entrance unit has been added to the northwest façade
at a later date. The entrance leads to the changing room
and that leads to the warm room through a door opened
in the middle of the north wall that is bordered with a
rectangular cuspidate arch. The hot room is in the
centre and consists of three iwans while the north and
east corners functions as private rooms. The exterior
façade is completely plastered and lime-washed and all
of the domes have been cement coated with the
exception of the circular glass windows (Yılmaz, 2002)
(Figure 3).

Cumhuriyet Hamam (Bali Bey Hamam) lacks an
inscription about its construction and renovation
however, the Prime Ministerial Archives hold a record of
the structure under “…Bali Beg hamam Ottoman
Imperial Construction Contract” belonging to the Teke
Region dated 1606-1607 (Hijri: 1015). The building has
a 12.00 x 24.00 m sized rectangular plan that extends
on the east-west axis. The eastern façade that looks to
the Bali Bey Mosque is made of rubble stone. The
building is accessed from the western façade which
initially leads to the dressing room that features a
hipped roof that has lost its original form. The door
opened in the middle of the eastern wall of the dressing
room leads to the warm room which consists of the
central domes section and two smaller domes areas on
either side. The hot room is accessed from the door
opened on the eastern wall of the central domed area of
the warm room. The hamam is covered with a roof
containing windows known as “elephant’s eyes”. The
building does not feature any decorations and has lost
its original form internally and externally by means of
various interventions (Yılmaz, 2002). Amongst the
examined hamams, Bali Bey Hamam is significant for
being the oldest structure outside the citadel during
Ottoman rule (Figure 3).

Ömer Pasha Hamam (Bey Hamam) is one of
the oldest hamams in Antalya’s Elmalı District. It is
mentioned on records in 1455. Back then, the
foundation is in the name of Mevlana Ali. There are
records of the building in the foundation logs of 1530
and 1567. The hamam is located to the northeast of
Ketenci Ömer Pasha Mosque and it is believed to be
today’s Bey Hamam. However, this is not precise
information. The structure known as Bey Hamam has a
renovation inscription dated to 1890 (Duymaz, 2008).

The hamam which consists of cold, warm and
hot rooms has a plan of four iwans and cells in all
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Figure 2a, Figure 2b, Tekeli Mehmet Paşa Mosque Şadırvan, plan (original, 2017)
Figure 2c, Figure 2d, Murat Paşa Mosque Şadırvan, plan (original, 2017)
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IV. Conclusion

Owing to its climate and location, Antalya has always been a popular place to live in Anatolia in all stages of history. There are several historic structures from the Ottoman Era within Antalya. The water structures examined in scope of this study are located in Elmalı District, one of the fertile grain production centres of Anatolia during the Ottoman period, and in the historic Kaleiçi quarter on the coast, in downtown Antalya. Although previous renovations have caused a certain degree of damage to these structures, they still exist and even continue to be used within the historic fabric of the area. The existing relieves for the examined structures have been disseminated and relieves were prepared for those without in order for them to enter literature.

References

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