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Theses

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Baths Sited in Buda in the Ottoman Period of Hungary

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As an archaeologist and Turkologist, I concentrate on the theme of Turkish-Ottoman baths in the course of my scholarly performance at the *Budapest History Museum*, Budapest, Hungary. As many as three Turkish-Ottoman baths were reconstructed and hence archaeologically investigated under my supervision in Budapest between 2004 and 2009. Having been conducted mostly in cooperation with art historian *Judit Lászay*, these on-site archaeological excavations constitute the basis of my doctoral dissertation. I, in teamwork with Mrs. Lászay, supervised the archaeological excavations of the *Rudas Bath* (2004-2005, 2009), the *Rác Bath* (2005-2008), and the *Császár Bath* (2006, 2008, 2013). In the course of and subsequent to these large-scale archaeological projects, I exerted efforts to expand my knowledge of the Turkish-Ottoman bath complexes via the aid of foreign fellowships (2006, 2008, 2013) which entailed the collection of foreign, mainly Turkish literature on the one hand, and further fieldwork (e.g.: on-site visit at and studying existing standing historic baths in Turkey) on the other hand.

I have identified bulk data of hundreds of constructions in Turkish literature of a large volume and of a variegated nature. I was invited by the *Kaymakam* (governor) of *Iznik*, Turkey to peruse the historic baths of Iznik, four of which were in ruins but still untouched by any reconstruction of the 20th century. I successfully identified analogues with the baths in Buda. Relying upon my observations, I concluded that the finds unearthed in Buda held a very special status in the research on the cultural history of the Ottoman Empire. Compared with the entirety of the Ottoman Empire, this assemblage of finds dating to a very narrow period of 150 years could be distinguished suitably from those dating to the preceding and ensuing historic periods. The narrow period referred to above falls into one of the most relevant, classic architectural periods in the history of the Ottoman Empire. Owing to its easy-to-date feature, the assemblage of finds, both tangible and constructed, has created a solid foundation to clarify particular problematics. As regards the baths in the Ottoman Period of Hungary, the latter deserves utmost attention, because the structures and the operational technology of the baths dating to the Ottoman Period were scarcely refashioned until the 20th century. Therefore, the archaeological assemblages of finds unearthed under my supervision in Buda are truly expedient to be used as a baseline for dating particular details, reconstructions and facilities that possibly have no constructional identification (labeling).

I decided to define two profound headways of data and information processing in regard to the Turkish-Ottoman bath complexes in Buda after all: (i) the explicit presentation of buildings analyzed; and (ii) the assessment of such facilities in view of the Ottoman Empire. First, I desired to focus on thermal baths, because only four of such baths were built in Buda in the Ottoman Period of Hungary. I supervised the archaeological groundwork of three of them, thus considering the relatively well-known four complexes referred to above within the corresponding category seemed to have been a logical classification. Nonetheless, as data processing progressed, it turned out that it was important to consider all of the baths

(complexes) built in Buda in the Ottoman Period of Hungary for the purpose of particular analyses. This required me to associate the data processing of three, substantially less known steam baths with my doctoral dissertation. Eventually, my doctoral dissertation includes the archaeological assay of every bath constructed in Buda in the Ottoman Period of Hungary in this manner. I completed my scientific work on the basis of archaeological excavations conducted at three baths complexes (Rudas, Rác, and Császár Baths) under my supervision and of the relevant excavation documentations compiled by archaeologist Győző Gerő in respect of further three facilities (*Király Bath*, *Toygun Pasha's bath*, and the bath of the Pasha's Palace). In one particular case, the building itself, which is assumed to be a steam bath located on the *Várhegy* (Castle Hill) once financed by the Sultan's treasury, has utterly remained unknown. During his career, archaeologist Győző Gerő scoured the architectural relics built in Hungary under Ottoman rule, and so he excavated many sites of baths. Unfortunately, he published only minor part of his results in his book that is meant to present Ottoman architecture in Hungary (*Győző Gerő: The Relics of Ottoman-Turkish Architecture in Hungary, Budapest, 1980*). The book includes the baths built in Buda, but their analyses ostensibly pertain to limited on-site research. Compared with his conclusions, archaeological excavations conducted under my supervision at the outset of the 21st century have brought very many fresh and remarkable results.

In addition to the outcome of the archaeological excavations supervised by me, I also capitalized on written and imagery sources. I found myself in a very fortunate situation as scholar *Balázs Sudár* collected and published the written sources nearly a decade ago, so that his achievement facilitated mine significantly in this respect. I successfully managed to use original manuscripts in two cases: (i) *Sokollu Mustafa Pasha's waqf*, and (ii) *Edward Brown's* travelogs. The latter were of utmost importance, because Győző Gerő referred to a drawing that, despite unpublished, was included in Edward Brown's manuscripts. I successfully tracked down this drawing at the British Library; it allowed me to realize that these travelogs included somewhat more information than the volume in which they were finally published.

The Budapest History Museum is licensed to incorporate the collection of imageries that depict the metropolis and its ancestral forms (townscapes) in its scope of collection. Therefore, the Archives of Section Drawings have preserved nearly all *vedutas* (highly detailed large scale painting or print) dating to the 16th and 17th centuries that can be used expediently in respect of the Turkish-Ottoman baths in Buda. Military engineer *De la Vigne's* survey, which shows the baths subject to my doctoral dissertation on a map as well, has been of an extraordinary nature.

The Hungarian National Archives and the Budapest Metropolitan Archives have preserved 19th and 20th century architectural drawings that portray the still standing four thermal baths referred to above. These drawings were produced during the reconstructions of these baths carried out in the past centuries. They illustrate very many elements that were

demolished either during such reconstructions or in the course of the remedial works taking place subsequent to World War II.

I used the presented information and data of avail to describe the buildings and the environment of the particular baths as accurately as possible.

Buda in the Ottoman Period of Hungary

Prior to describing the buildings, it is worth knowing the town in which they have been located. In order to do so, the history of politics is intentionally left out of explanation in this dissertation as regards the demonstration of the history of Buda in the Ottoman Period of Hungary, but the metamorphosis of the townscape has been accentuated instead. I strive to illustrate the residents and how their content influenced the formation of the townscape. While half of the population of 8,000 in Buda after the occupation of Hungary by the Ottoman forces was not Muslim, their number decreased below 1,500 until the end of the 16th century, but the total number of the population remained unchanged. Of the conquerors, nearly 2,500 to 3,000 Muslim civilians also lived in the town in addition to soldiers. Historic research has indicated that, among soldiers, the number of those who made some extra earnings with some sort of craftsmanship was also notable.

After the occupation of Hungary by the Ottoman forces, buildings associated with the institutionalized Ottoman system nearly immediately appeared as was required by the overwhelming majority of the conquerors and the presence of newcomers. In addition to Christian churches converted into *djams* (mosque), newly built monasteries, *djams*, and *türbes* (tomb, mausoleum) appeared just within one-and-a-half decades. After that the transformation of Buda genuinely accelerated during Sokollu Mustafa Pasha's beylerbeydom (1566-78): *djams*, *medreses* (educational institution), *caravanserais* (roadside inn), and baths were sited, and the fortification of the gun powder mill was built at the boundary of Buda which was connected with *Pest* through a bridge.

Mediaeval buildings were also converted in addition to the construction of typical Ottoman facilities. Having been accounted for by Western travelers, dwellings daubed with clay and with planked windows were the elements of architecture conspicuously different from the actual architectural style of Buda in the Middle Ages. Mud bricks framed with wooden structures having been typical all over Anatolia appeared in Buda. The Pashas' Palace in Buda once located on Várhegy must have been an outstanding example to this architectural method.

Baths (hamams) in the Ottoman Empire

The architectural structure of the Turkish-Ottoman baths (*hamams*) scarcely changed during the centuries: it roots back to Roman times, namely to Roman baths whose most essential modifications had been implemented by Muslim cultures existing before the Ottoman Empire. Stagnant waters in pools were refused by the Islam (or mayhap pools that required water in a large volume were less reasonable in deserts), so that wall fountains releasing running water sustained a crucial role at these hamams.

Ottoman-Turkish baths fundamentally served sanitary and cleansing purposes. Their buildings consisted of three basic rooms: cool (ante)room, (luke)warm room and hot room that were supplemented with plumbing annex rooms. Used as a scene for social life as well, bathers changed their dresses in the cool (ante)rooms that were usually large, rectangular rooms, in the center of which stood fountains, and wall-seats stretched along their walls, where bathers could sit or place their clothes. (Luke)warm rooms, where bathers could wash by fountains, opened from here. The inner core was the hot room, in the center of which stood a large marble block of stone called *göbek taşı* (belly stone), wall-seats stretched along its walls, and wall fountains were affixed to them. Niches, i.e. private chambers equipped with fountains to serve only a few bathers opened from this room. Water reservoirs and heating rooms were placed in the rear sections of baths which were heated by floor heating systems installed underneath every room, save the cool (ante)room.

Owing to interior loading inflicted by water and steam, the buildings of these baths were exclusively built of stone, their slabs of bricks, and only their cold (ante)rooms were typically covered with wooden slabs. We have knowledge of so-called open baths that were made of wood and were located on seashores or on shores of thermal water lakes in special cases. They rather resembled fenced beach bathing sites though.

Baths can be categorized in accordance with many aspects. For the analysis of the baths in Buda, I basically utilized methods applied in the Turkish research protocol. I examined these baths based on the following features: the groups of users (public or private baths), the structure of the plan of the entire complex and that of the hot room, the properties of waters used (thermal or steam bath), and the locations of the baths in the town.

As regards the plan array of complete bath complexes, there are segregated baths and those which consist of two, nearly identical buildings adjacent to each other sharing a common plumbing annex room. The latter are called twin hamams, and nearly third of all baths can be categorized as twin baths.

In view of the plan array of hot rooms, we can distinguish as many as eight typical designs in the Ottoman Empire. Added to *Semavi Eyi*'s classification, the buildings of the baths in Buda can be incorporated into this schematization.

The locations of baths refer to their functions within the town. There are buildings that were built as part of a particular *külliye* (complex of buildings), and there are edifices that were sited directly nearby marketplaces, while there are structures that were erected nearby functioning djamis/mosques in order to serve the residents of a specific urban quarter. All of these solutions were meant to realize as substantial income for the baths as viable.

What did an Ottoman-Turkish hamam dating to the 16th and 17th centuries look like after all anyway? Hamams, essentially, have an austere plan array, whereas a large-size cool (ante)room is connected with a rectangular space that is zoned into a few, smaller (luke)warm rooms followed by the hot room and incidentally a few private chambers. The buildings of the baths were decorated quite moderately: typical are the triplet arrangement of niches and openings, the special ornamentation of the door frames, changing wall surface, and the fair stalactite decoration. The backs of marble basins and taps are moderately ornamented.

Baths (hamams) in the Everyday Life of Buda

The baths in Buda, save the only public bath on Várhegy financed by the Sultan's treasury, were bossed by the beylerbeys of Buda. Only the Rác Bath was not built by any pasha, but later it was acquired by Sokollu Mustafa Pasha who also had the Rudas, Király and Császár Baths built. Toygun Pasha had the only steam bath in the outskirts of the town constructed, and the pasha's private bath was located in the Pashas' Palace that once stood on the Várhegy. We can witness the exceptional architectural performance of Sokollu Mustafa Pasha who was the nephew of Grand Vizier Sokollu Mehmed Pasha and was originally born in Bosnia but was raised in the Sultan's court. After a few posts in Bosnia, he was appointed to supervise the *vilayet* (first-order administrative division) of Buda, where he was in office for an unusually long term of 12 years. Three members of the Sokollu family followed him in the same office. He donated his property, which incorporated the baths of Buda in addition to many other edifices, for charitable purposes.

The baths of Buda were finished by 1578 and no more was constructed during the entire period of 145 years of Ottoman supremacy. Compared with other towns of a corresponding size, it can be concluded that as many as 8 to 12 baths were necessary to serve an urban population of circa 10,000. There were 6 baths and 3 to 4 open baths in Buda. Grounded on this, it can be surmised that the reason beyond the cessation of constructions cannot be attributed to military actions but simply to the lack of demand toward more bathing facilities. This, concurrently, is indicated by the fact that all necessary institutions demanded by Ottoman culture were built quickly, within 35 to 40 years, subsequent to the conquest of Hungary by the Ottoman forces.

A preponderance of the baths in Buda is thermal; to say they were sited next to thermal water springs by taking advantage of the town's beneficial properties. The northern

cluster of springs has supplied water to the Király and Császár Baths, while that of the southern ones have supplied aqua to the Rác and Rudas Baths. The steam bath on Várhegy, the prevailing pasha's private bath and presumably Toygun Pasha's steam bath extracted water from the Danube River. All public baths, save the one located on Várhegy once financed by the Sultan's treasury, were built in the outskirts of Buda, where the inhabiting groups of conquerors settled.

Sokollu Mustafa Pasha had his edifices built in the town precisely according to plans, so that merchants arriving in Buda were welcomed by his caravanserais, nearby which stood his baths, the Rudas and Király Baths. Nearby the pilgrimage destinations also lay his baths: the Rudas and Császár baths.

Further scrutiny of the locations of the baths allows us to see that business considerations dominated his decisions under all circumstances. A warehouse of commodities and/or marketplace can be assumed to have been situated nearby Toygun Pasha's bath. There were two institutions, to say the bath funded by the Sultan's treasury and the Rác Bath, which had been built for the purpose to provide uninterrupted supply to the residents in the neighborhood. The medicinal water of the latter must have attracted visitors to come from remote regions as well.

The pashas' construction projects allow us to extrapolate the scheduled and planned siting of külliyes, such as Toygun Pasha's bath, and the Rudas and Császár Baths. The Rác Bath and the bath on Várhegy financed by the Sultan's treasury must have been constructed to serve a particular *mahalle* (urban quarter, district). The Király Bath can be categorized as a marketplace bath because of the caravanseraï located nearby.

When referring to the baths in Buda, my doctoral dissertation uses their modern contemporary definitions. One of the reasons to this is that it would be easy for the readers to identify these still functioning facilities. The other reason is that their denominations used in the Turkish-Ottoman Period are not always clear. Their definitions, oftentimes still problematic, were finalized by the end of the period only. Since all of the thermal baths in Buda can be associated with Sokollu Mustafa Pasha, using his name would not have been satisfactory to distinguish them adequately. Therefore, they were defined by their locations. To be noted that the Császár Bath was called Veli Bey's Bath despite its original founder. Balázs Sudár many times pointed out this contradiction which might as well refer to the fact that this bath was not built by Sokollu Mustafa Pasha, or the contemporary building of it incidentally stands on site of a previous bath. All we know today is that the contemporary standing edifice was built in 1574 as has been verified by dendrochronological analysis. This is also announced by its constructional identification (label) on its façade that has survived times. No precedence dating to the Ottoman Period of Hungary has been unearthed within its area. We might think of passing the definition of mahalle through historic ages after all.

Reconstruction Options of the Baths

I also attempted to finish the theoretical reconstruction of the edifices based on data available in varying amounts for the particular facilities. Most of the data is available for the Rác Bath where nearly the entire edifice stands within the contemporary bath. We know the least of the bath on Várhegy once funded by the Sultan's treasury: no imagery, no drawing, no documentation of any archaeological excavation is of avail. The particular baths can be reconstructed in a very contrasting manner within the range of polarity created by the above two relics. Nonetheless, plans and architectural surveys archived at national archives aided my work in addition to my on-site archaeological investigation.

I can now point out that the Rác Bath was of small size to which was added a single private chamber in the course of a reconstruction in the 16th century. The cold (ante)room was irregularly rectangular in its shape, and the spring supplying water to it gushed underneath. There was no fountain in the center of the cold (ante)room, but a well lowered into the floor was unearthed. Wall fountains were installed onto the walls. It is a fascinating feature that three pools were in the bath during its second period: one in the (luke)warm room, one in the hot room, and one in the private chamber.

The columned hot room of the Rudas Bath is considered to be a real delicacy in Ottoman bath architecture. A divided (luke)warm room was connected to it from the north, and also a large-size, rectangular cold (ante)room. There were no other rooms connected to it from the south, perhaps only water reservoirs. The building was propped in the direction of the Danube River.

The design of the hot room in the Császár Bath was also unique: it was the *sui generis* variant of a very widespread plan array. The array of four *eyvans* (large vaulted hall having one side open to a court) was further improved to have evolved into a space surrounded by eight *eyvans*. Private chambers positioned into the corners could be accessed through these *eyvans*. A small pool was built in one of the private chambers in addition to the large pool in the center of the hot room.

Nearly all of the rooms within the Király Bath still exist, but preceding research could unveil only certain parts of the building. Therefore, the size and shape of the cold (ante)room and the (luke)warm rooms require further specification. Two private chambers are connected from the north via an *eyvan* to the star-shaped hot room.

Toygun Pasha's bath was the only twin hamam in Buda. Regretfully, only the foundation of its floor heating system has survived times and certain parts of it were unearthed only.

The bath of the Pashas' Palace stands in a much better condition in the cellar of the former Carmelite monastery. This bath was composed of two rooms; a small size cold (ante)room was connected to an octagonal hot room.

Technical Issues Related to the Bath Architecture of the Ottoman Period

By describing the particular features of the baths in this chapter, my objective was to analyze the generality or customization of the solutions identified in Buda. The explicit description of the constructional techniques of the baths allows us to conclude that there were specific standards typical to all constructions.

Building materials:

1. raw/building materials found in the vicinity were used
2. walls were built of stone
3. wooden posts were placed underneath the walls
4. joists were used
5. bricks were preferably used for openings and more complex architectural sections
6. vaults were built of bricks
7. nests of the water pipes were built of bricks
8. water pipes were made of clay (also white clay) and were locally manufactured
9. floors were made of stone
10. two types of mortar were used (lime mortar colored roseate with brick dust; white lime mortar)

Architectural techniques:

1. “sandwich”-type wall structure
2. vaults have a width of a simple row of bricks
3. chips & mortar foundation lay underneath the floor
4. bricks were used to lay water pipes to falls
5. textile was used to seal/insulate the water pipes
6. sewage systems were built underneath the floor surface to drain subterranean waters
7. walls were plastered (lime plastering)

Plumbing – thermal baths:

1. catchments of springs built in a way to drain water by force of gravity
2. water pipes were made of clay
3. water reservoirs were built to ensure appropriate pressure and water quantity
4. water was drained from pools through many different sewage networks
5. other streaming underground waters must have been dealt with as well

Decoration:

1. moderate decoration
2. stalactite ornamentation only in major buildings (Rudas, Császár)
3. plastered surfaces: red, roseate, white colors

Illumination:

1. small skylights
2. dome rooflight verified only at Rác Bath
3. windows in rooms

Information Connected with the Construction Process

Eventually, I made efforts to reconstruct the main features of the constructions. As a result, it became unequivocal that local mediaeval buildings did not at all represent any precedent for the constructors of the baths in Buda. All walls within the areas of the planned siting projects were demolished, springs were jammed, and cemeteries were swept away. This suggests that standing buildings did not have any weight in the decision making process where to build the new ones, and the constructors did not desire to expand or use them. This is not surprising in the case of edifices, such as baths, that were designed to have very elaborated plumbing and civil engineering properties bear upon a standardized plan.

The Status of the Baths in Buda within the Framework of Bath Architecture of the Ottoman Empire

Finally, how the baths of Buda may dovetail with the architecture of the Ottoman Empire remained the only open issue. The Rudas and Császár Baths can expressly be categorized into the division of large baths – only a few baths of such dimension can be mentioned. The Rác and Király Baths have an average size. As regards their plan, they are typical 16th century buildings. Their nearly rectangular design is composed of three parts: a large, square-shaped cold (ante)room, a rectangular space divided into many rooms which make up a (luke)warm room, and a hot room furnished in a square-shaped space. The buildings are moderately decorated. Presumably, their cold (ante)rooms were constructed with wooden slabs. Local mediaeval architecture did not affect the design of the baths, thus edifices bearing the design features of classic Ottoman architecture appeared in Buda.

Hot rooms, more specifically the hot rooms of the Rudas and Császár Baths are truly fascinating: analogues of the Rudas Bath can be identified in Istanbul, Turkey, where columned baths were built for Sultan Suleiman and Grand Vizier Sokollu Mehmed. Both baths were designed by Mimar Sinan. Queerly, the name of Mehmed Pasha's bath is identical

with the Turkish denomination of the Rudas Bath, to say it is called the 'Green-Columned Bath'. The Császár Bath has no authentic analogue; features similar to particular parts of it can be identified only.

The columned array, the design of annex rooms, and the improved classic plan designs were solutions in Mimar Sinan's set of architectural tools. The baths of Buda are not listed in his biography where his works are referred to. However, we know that he designed Sokollu Mustafa Pasha's djami and türbe in Buda. It was customary in that period that one of the architects assigned by Sinan who represented the Sultan's court was in charge of supervising constructions in the countryside, instead of the chief architect. This must have occurred in this case as well. Therefore, I shall extrapolate that, if not Sinan himself, one of the architects associated with the Sultan's court must be considered to have been the designer of the two large baths, the Rudas and the Császár Baths in Buda.

It can be concluded after all that the baths of Buda that were constructed within three decades subsequent to the conquest of Hungary by the Ottoman forces are typical Ottoman structures. Posteriorly, they became predominant architectural elements in Buda throughout the entire historic period.