

THE ARCHITECTURE OF PUBLIC BATHS OF TUNISIA: A TYPOLOGICAL ANALYSIS

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Abstract

The Punic, Roman, Byzantine and Islamic civilizations contributed with their architectural knowledge to the development of different public baths design. Based on previous historical work on the collective baths in the Mediterranean basin, and in particular Tunisia, this study aims to explore and analyse the hammāms (Islamic public baths) of Tunisia.

This study uses a semantic and representative approach to help define the components of the historic public bath, and to reveal its integration modes in the urban fabric of the medina, and eventually represent the functional diagrams of bathing practices. It clarifies how the functioning mode of the bath is in direct relation with the evolution of the society (its lifestyle, its culture and its own paradigms) and classifies these building types according to a semantic division of the architectural places. Hence and in order to analyze the hammām spaces, a matrix of incidence [An analytical tool which quantifies the relations existing between the spaces of the same building] has been used. As a result of this analysis, three typologies of Tunisian hammāms have been identified.

Keywords:

Hammāms, North Africa, bathing, culture, practice, Tunisia.

Introduction

Tunisia has received several civilizations on its land. The original people of Tunisia and North Africa in general were the Berbers well before the arrival of conquering civilisation such as the Punic, the Romans, Byzantine and finally the Muslims.

Each of these civilizations appropriated the Tunisian territory by settling down in its own way and responding to its needs by using its own specific architecture and form of urban settlement. Further to the vestiges that they bequeathed to us, one can notice that the urban and architectural reality is different from one era to another. This was due to the influence of a culture dominated by a change of religion which brings with it new lifestyles, traditions and practices.

However, cities which were the product of these successive civilizations (Punic, Roman, Byzantine or Muslim) respond to the same needs of shelter, protection and hygiene. For this last need, public baths were designed and developed and continued to be an important urban amenity changing its character and

practice at different historic periods.

Identification of the Bathing Architecture in Tunisia

Located in a strategic site of the Mediterranean basin, Tunisia has been sought after since the antiquity for its geographical territory, its climate and its landscape which have contributed to shape its deep cultural identity. An attempt to record the durability and modification of the

public bath space has been carried out using a chronological analysis of the architectural and urban phenomena followed by the study of common urban amenities.

We identified and represented the typical systems of the urban facilities architecture in Tunisia, located in space and time, in order to identify the architectural systems of public baths in North Africa, and their categories as illustrated in figure 1.

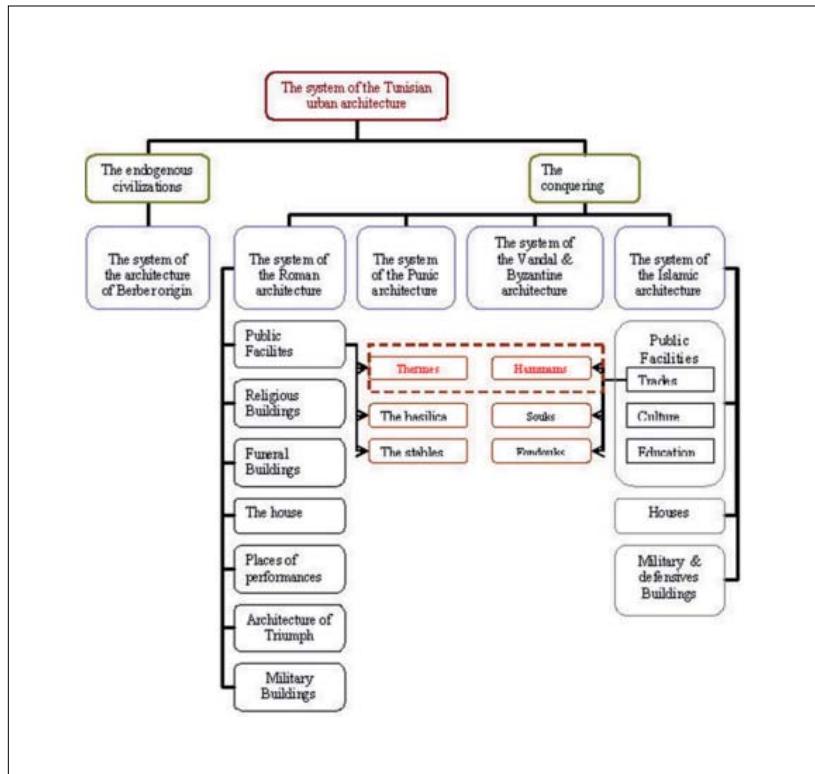


Figure 1 : The System of the Tunisian Urban Architecture through Various Civilisations. (Source: Author).

Chronological Evolution of the Collective Bath in The Mediterranean

Public baths constituted one of the major facilities of the city. On the architectural dimension they were considered as landmarks because of their massive scale and their complex spatial organization. They were considered as an essential centre for the life of the city inhabitants. It is useful, in the context of this study, to go back in time and investigate the genesis of this building type and its evolution according to its geographical and historical contexts.

Specification of the Public Baths in North Africa

Bathing Reality in the Maghreb Countries

North Africa was populated at first by Berber nomadic tribes well before the establishment of the foreign colonies of Punic, Romans, Byzantine and Muslims. The architecture of public bathing facilities was specific to each of these civilizations; it not only absorbed features from its predecessors' history but was also adapted to the local culture. There have been variations in the architecture of thermal baths in all the Mediterranean Basin, including North Africa since the Punic and the Byzantine eras.

The integration of the Maghreb to the Muslim world provoked a major transition in the architecture of public baths due to the change in bathing practices. Public baths or hammāms in Islamic cities (or medinas) are important facilities, but not considered anymore as landmark buildings in the city. Their status was downgraded to a subordinate position (bath of mosque, bath of district, bath of madrasa). They became secondary facilities located

within the various quarters of the urban fabric, providing social and hygienic functions. Their architecture was affected by a number of changes such as the disappearance of the cold water pools, the replacement of the frigidarium by a large undressing room and the limitation of the hot sector in a single room. The big establishments of the polycentric roman city, with their monumentality and their multiplicity of functions definitively disappeared in the hammām buildings.

Definition of the Concept and the Representation of the Collective Bath

Public baths of medieval Arab-Islamic era were recommended for their hygienic, purifying and therapeutic virtues. Beyond their function, they represented simultaneously a place of care, sacredness and social interaction. It is a central urban facility that is generally located in most cases on the main axis of the medina, adjacent to a mosque. The entrance gate to historic hammāms in the medina of Tunis is indicated by the coloured green and red stripes decorations. Unlike the Roman monumental baths, the hammāms have evolved towards different proportions between the reception hall / undressing and the bathing spaces. Generally two distinctive large areas are found: the undressing/changing room and the bathing rooms. The usual succession of rooms with gradual increase in temperature, reminiscent of Roman baths, is maintained in the Tunisian Islamic baths.

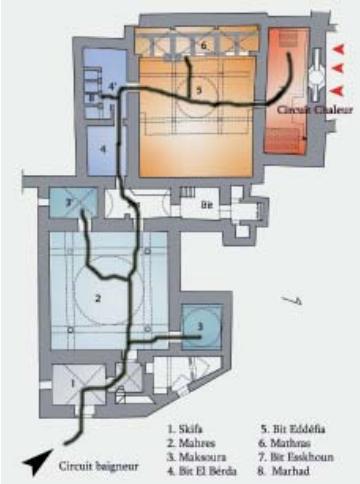
Name	Characterization	Function plan	The Hammām in the Medina
Hammām Youssef Saheb al-Tabaa	<p>Skīfa, hallway</p> <p>al-Mahras, The room of undressing and rest.</p> <p>Bit el bārēda, one or several rooms of transition, modest spaces provided with latrines.</p> <p>Bit eddāfia , it is the first warm room, where the washing and bathing take place, it is warmed by contiguity</p> <p>Bit esskhūna, it is the warm room.</p>	 <p>1. Skīfa 2. Mahras 3. Maksours 4. Bit El Bārēda 5. Bit Eddāfia 6. Mahras 7. Bit Esskhoun 8. Marhad</p> <p>Circuit baigneur</p>	 <p>1. Le hammām 2. Le frendouk 3. Le moydaj 4. Le caf 5. Le souk Eljdid 6. Le hammām 7. Le frendouk 8. Le moydaj 9. Le caf 10. Le souk Eljdid</p>

Table 1 Hammām Yūssuf Sāhib al-Tābaa in the Medina of Tunis: The Components of the Tunisian Public Bath (Source: Author, 2008).

Identification of Hammāms to Support the Analysis

A list of Islamic public baths in Tunisia has been established. The development of the corpus was made from the listing of hammāms among which a selection was made of those located inside the medinas and villages. Although, some buildings are part of our taxonomy, unfortunately they will not be included in this study because of the lack of complete and adequate documentation.



Figure 2 Localization of the Studied Baths in the Tunisian Territory. (Source: Author).

Arab - Islamic Baths		Dating	Surface	Situation	Setting Up
H1	Hammām Yûssuf Sâhib al -Tâbaa	XVIII	983	Quartier Bab swika - Tunis	The hammām is situated on the meeting of Sidi Al Alwi's street and The Sidi shiha street
H2	Hammām al -Dahab	XVI	196	Quartier Bab swika - Tunis	Is situated in front of the mosque, it was built on a sloping ground
H3	Hammām Sidi -Khlaf	XVI	98	Médina de Tunis	
H4	Hammām des teinturiers		340	Médina de Tunis Rue des teinturiers	
H5	Hammām al -Khachâchîn	?	550	Médina de Tunis El Kachachin	It opens on the souk of bookshops
H6	Hammām de la Noria			Médina de Tunis	
H7	Hammām Souk el Grana	IX		Médina de Tunis	
H8	Hammām de Mahdiya			Médina de Mahdiya	
H9	Hammām Essouk			Zaghouan	
H10	Hammām Sidi Abdelali			Slîman	
H11	Hammām Beni Khîar			Beni Khîar	
H12	Hammām Shabou Trabelsia			Solîman	
H13	Hammām Hammamet			Médina Hammamet	

Table 2: The Corpus of Hammâms: Inventory and Localization of Baths. (Source: Author).

Components		H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13	Constituent Presence
Architectural Spaces	1	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	2	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	3	X	X	X	X	X	X	X	X	X		X	X	X	11
	4	X	X	X	X	X	X	X	X	X	X		X	X	12
	5	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	6	X	X	X	X	X		X	X	X	X	X	X	X	12
	7	X	X	X	X	X	X	X	X	X	X	X	X	X	13
	8	X	X	X	X	X	X	X	X	X	X	X	X	X	12
	9										X			X	2
	Variants	C1	C1	C1	C1	C1	C2	C1	C1	C1	C4	C3	C1	C1	

Table 3: Classification of the Permanent Constituents in the Hammâms. (Source: Author).

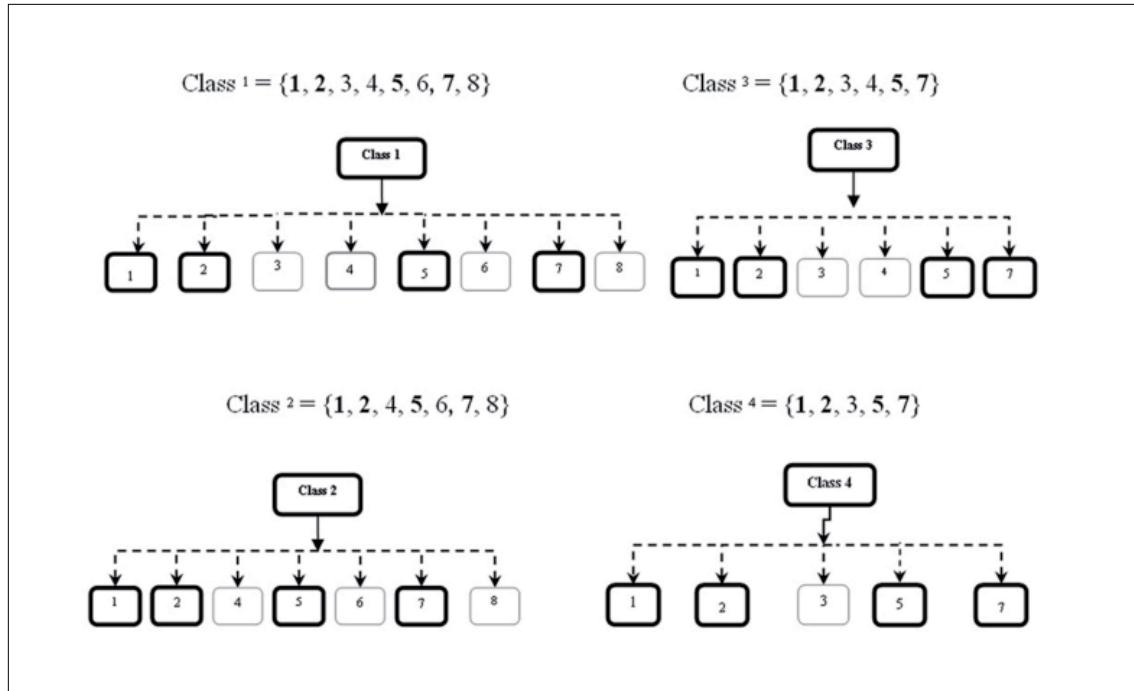


Figure 3: Taxonomy of Public Baths-Hammāms. (Source: Author).

Analytical Decomposition of the Bath for the Exploration and Classification of its Constituents

Through the semantic and systematic analytical decomposition of the bath structures, a first classification is identified. This classification concerns the various public baths by considering them as architectural spaces and sub spaces, they are the physical conformations defined by their nomination. The matrix of incidence has been applied to the corpus of selected

hammāms. This matrix is from the theory of decomposable systems of Simon Herbert developed in 1969 (Le Moigne, 1994: 248).

Analysis of the Hammāms

From an analytical approach, the consideration of the architectural spaces is through physical observable facts. These facts are defined through the distinction between the configurations of the inhabitable environment and the configuration of the solid volumes. This is revealed by the interrelations of the interfaces;

i.e. the existence of several openings allows higher exchange between spaces. Hence, the analysis is empirical then quantifiable.

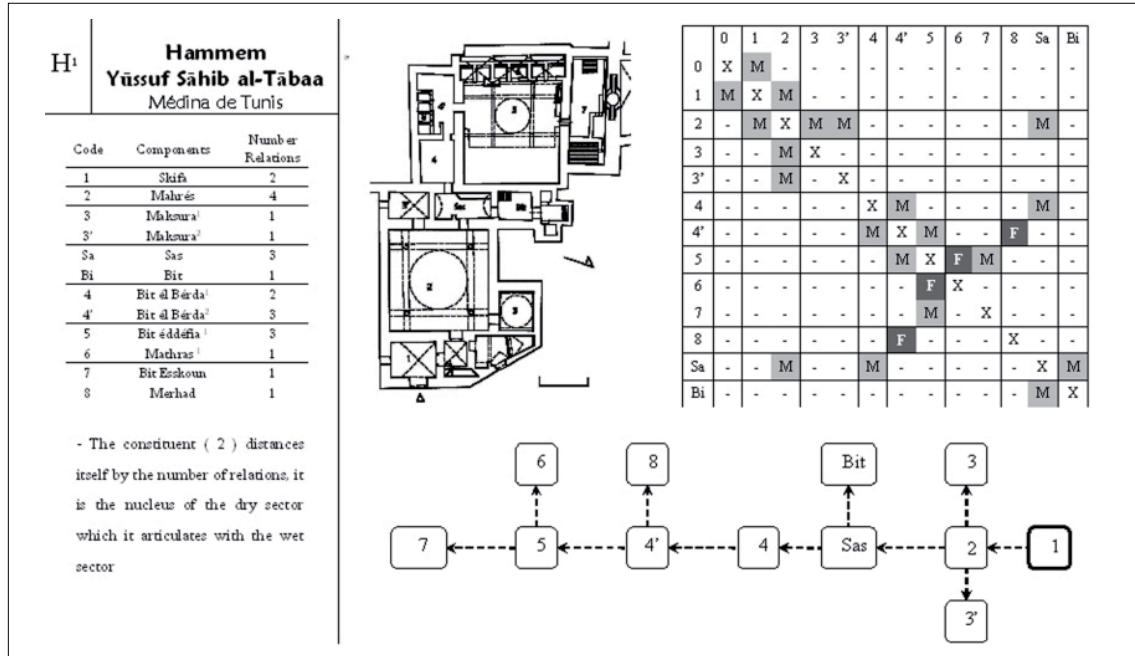


Table 4: Example of Application of the Matrix of Incidence. (Source: Author).

- There is no relation, spaces are taken away and present no interface.
- Weak interaction, spaces are adjoining and the interface which connects them contains a single bay realized by a window.
- Average Interaction, spaces are adjoining, the common interface presents a single bay, a door.
- Strong interaction, spaces are adjoining, the common interface presents several bays: a door and a window or more

Tunisian Hammāms Typologies

On all the studied hammams, we notice the existence of constants in the spatial composition of the building. The spaces (1, 2, 4, 5, 7) relating to = (Skifa, Mahrés, Bit Eddéfia, Bit El Bérda, Bit Esskhouna) are the elementary components of the Tunisian hammam.

Other added spaces of secondary functions are: (3, 6, 8, 9), but they are strictly and successively bound to the first ones (2, 4, 5). The mode of movement of the user refers to a single category of buildings with retrograde itinerary: the user arrives in Bit Esskhouna, turns back and go through the bath by the other way, on crossing various rooms up to the mahrés. The itinerary is made by going through the elementary components (1, 2, 4, 5, 7) in this direction: 1--2--4--5--7. However, there is a variety in the organization of the constituent (6, Mathras) in the itinerary of the user.

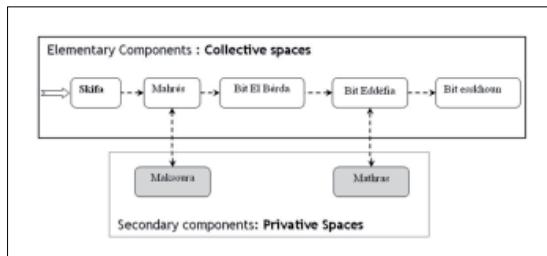


Figure 4 : The Itinerary of the User in the Hammām. (Source: Author).

The study of these classes carried out by the use of the matrix of incidence, which takes into account the hammāms' spatial components and their relationship to each other has helped to define the systems of organization. This

analysis has revealed the following:

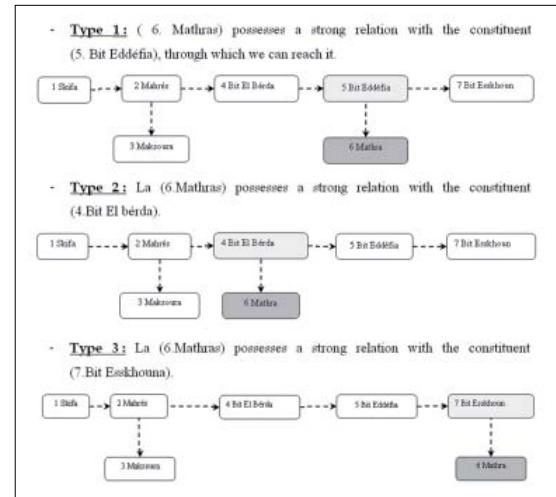


Figure 5 : Typologies of Hammāms in Tunisia. (Source: Author).

Firstly, at the level of the *system of organization*, we noticed (figure 6):

- The use of polygonales forms (rectangles and square) which are proportional the some in the others.
 - The orientation of the cold entities in the North and the tepid warm entities, in the South.
 - The plans consist of two different entities:
 - A wet zone (activity: bath) and, dry zone (activity: entrance, and changing).
 - Both entities have the same logic.
- organisation: A big square which constitutes the nucleus of the entity surrounded by rectangles of diverse dimensions.

Class 1 {1, 2, 3, 4, 5, 6, 7,8}		Class 2 {1, 2, 3, 4, 5, 7,8} without (6.Mathras)		Classe 3 {1, 2, 3, 5,7} without (4.Bit Bérda, 6.Mathras)		Class 4 {1, 2, 4, 5, 6, 7,8} without (3 :Maksoura)	
Type 1		Type 2		It is a unique and particular one which we cannot classify		It is a unique and particular one which we cannot classify	
H1	Hammām Yusuf Saheb El tabaa Médina de Tunis	H2	Hammām Al Dhahab Médina de Tunis	H6	Hammām de la Noria Médina de Tunis	H11	Hammām Béni Khiar Médina de Béni Khiar
H4	Hammām des Teinturiers Médina de Tunis	H5	Hammām des Kashashin Médina de Tunis				
H 3	Hammām Sidi Khalaf Médina de Tunis						

Table 4: Classification of the Hammāms. (Source: Author).

Secondly, at the *level of the atmospheres* (figure 7):

- The findings at this level match the results obtained at the level of spatial organisation with a wet sector (activity: bath) and a dry sector (activity: accessibility and changing). The change of internal atmosphere is made only at the level of the wet sector which is marked by a gradual rise in the temperature of the rooms, since the room n°4 correspondents in "Bit El Bérda" passing by "Bit Eddéfa" until reaching "Bit Esskhoun" spaces. This atmosphere division segregates the building into two main entities: the dry and the wet sectors.

- The deepest and least lit components of the building correspond to the warmest spaces inside the bath.
- The absence of bays to avoid the decrease of the temperature.

Thirdly, at the level of the *uses and practices of bathing* (figure 8):

- The tepid entity is complex, it is a centred element around which are organized the other entities.
- The itinerary of the user follows the direction of heat and darkness.

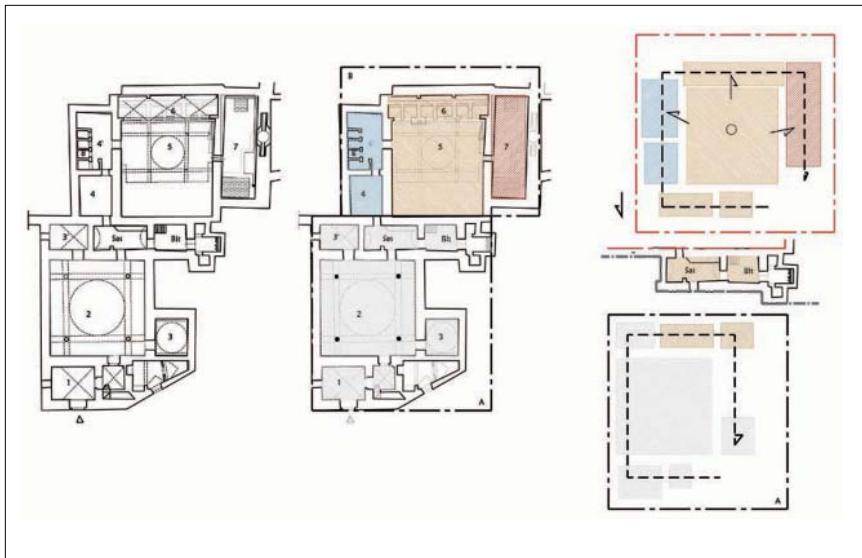


Figure 6: System of Organization - Composition, Dimensions and Proportions (Source: Author).

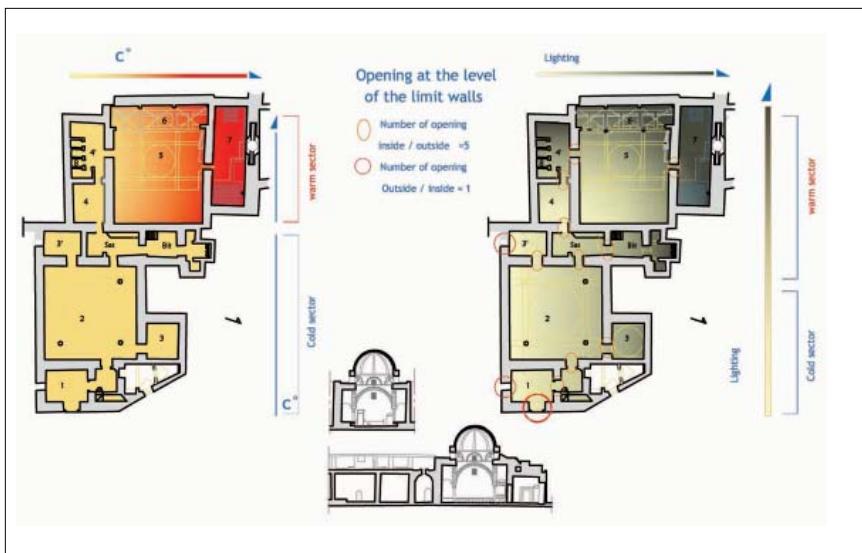


Figure 7: Configuration of the Atmospheres and Manner. (Source: Author).

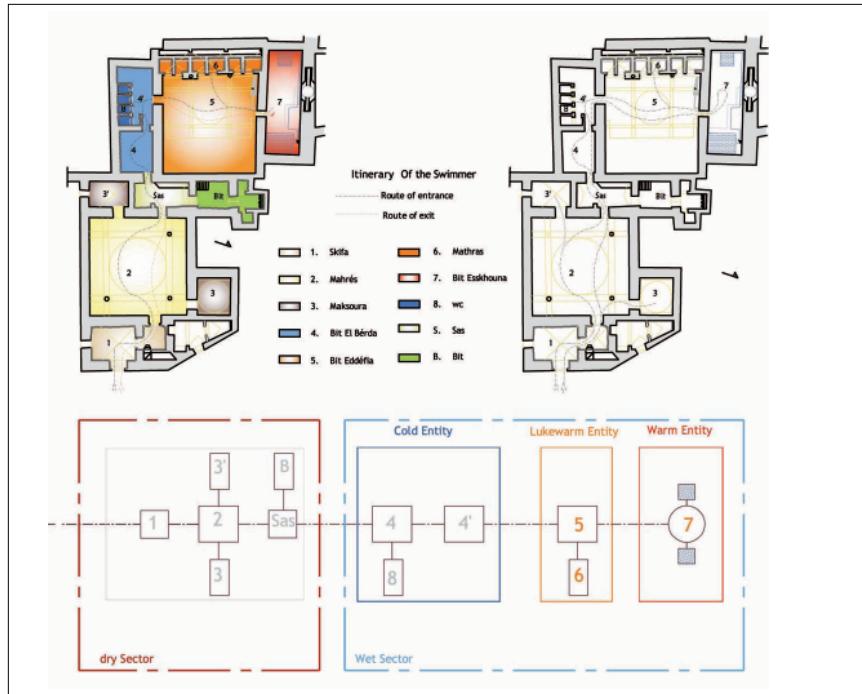


Figure 8 : The Uses and Practices of the Bath. (Source: Author).

Finally and at the structural level (figure 9), the following can be stated:

- The existence of axes of substances distributed according to an irregular plot but generated by the central regular spaces of the Mahrés and Bit Eddéfia, and by the shape of the plot of land (seen on roofs shapes).
- We find in this studied building a report: 1/3 of the structure with regard to the complete surface of the building.

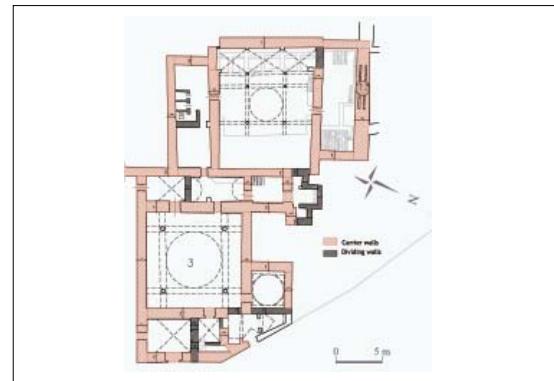


Figure 9 : Conformation of Structure. (Source: Author, 2008)

Synthesis

There is a need to widen the scope of this research in order to analyse a larger sample of hammāms. The research presented in this paper has been limited by mitigating the gaps and the difficulties encountered in the fieldwork and the collection of data. It is hoped to develop a further understanding of the genesis, the evolution and the identity of the public baths architecture and highlight the breaks and continuities between them. The transition between the thermal baths and the hammāms need further research into various types of physical configurations. This understanding will provide a stronger basis for the future restoration and re-use of historic public baths.

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