

CULTURAL versus MATERIAL; CONSERVATION ISSUES REGARDING EARTH ARCHITECTURE IN SAUDI ARABIA: THE CASE OF AN OTTOMAN FORT: IBRAHIM PALACE IN AL-HOUFUF

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Abstract— Middle Eastern countries are suddenly confronted with the problem of a severe loss of architectural heritage, which is the material manifestation of their own cultural inheritance and thus that of their identity, particularly under conditions of a sudden, rapid, radical and haphazard way of transformation as imposed over a society and its cultural geography by global impacts. This paper aims to argue whether the conservation issues regarding earth architecture in Saudi Arabia are materially or culturally based with specific reference to Ibrahim Palace since it represents this conflict. The paper suggests that the problems regarding the architectural heritage conservation in Saudi Arabia are threefold; material, cultural and philosophical.

I. INTRODUCTION

Countries in the Middle East and Saudi Arabia, in particular, are currently undergoing a rapid transformation [1] in social, economic as well as physical terms [2]. Inevitably, they are suddenly confronted with the problem of a severe loss of architectural heritage, which is the material manifestation of their own cultural inheritance and thus that of their identity [3] (Al-Hariri, 1990). Along this process of abrupt and haphazard transformation under global pressures, the notion of 'new' is glorified onto a higher ground to such an extent that anything 'old' is not only looked down on but also considered as a candidate to be replaced by new which is associated with progress and being integrated to the global networks [4] (Cetin, 2010b). Nonetheless, what is called 'old' is, in fact, traditional, vernacular, local and genuine and is, therefore, a very valuable asset and needs to be conservation, particularly under such conditions of a sudden, rapid, radical and haphazard way of change imposed over a society and its cultural geography. Once this unique asset is lost it can not be replaced and left open to distortion in time which may create irreversible consequences in terms of socio-cultural dynamics simply because what is unique and specific to the locality can

not be re-invented or post-produced. Although conservation of architectural heritage has become a very well established discipline, the conservation of heritage, and of adobe architecture, in particular, is a very new issue in Saudi Arabia [5-8]. Although variations in approaches to conservation is possible to observe within this cultural geography, the main perception regarding the matter is that what is called 'old' is difficult and expensive to maintain, and burdensome to upgrade to contemporary comfort conditions. As a matter of fact, what is more influential than aforesaid views is the conception of traditional as a substance to be relinquished for the betterment of the civilization [9]. Such perception of heritage seems to be reflected on the misjudgments and misinterpretations regarding conservation and restoration decisions which may, in the longer course of time, cause fraudulent transmission of architectural knowledge instead of its conservation despite its tentative intentions, particularly in terms of continuity [10]. On the other hand, conservation philosophy favors originality and honesty of construction techniques and materials. Along this line, Fielden suggests that conservation of heritage is associated with cultural continuity [11]. Moreover, legislation and regulations (such as Venice Charter, 1964; Nara Document on Authenticity, 1994; Charter on the Built Vernacular Heritage, 1999; ICOMOS Charter – Principles for the analysis, conservation and structural restoration of architectural heritage, 2003; The ICOMOS Charter For The Interpretation and Presentation of Cultural Heritage Sites, 2008) recommend that features of architectural heritage should be preserved as they are, in (and with) their own context and restorations (if necessary) should be made on the basis of genuine construction materials and techniques. Earth (adobe) architecture of Saudi Arabia (Figure 1) with its unique construction techniques and materials (Figure 2) presents potentials in this regard.

This paper aims to argue whether the conservation issues and problems regarding earth architecture in Saudi Arabia are technically, materially or culturally based with specific reference to Ibrahim Palace (Figure 3) since it represents this conflict as will be elucidated below. The article suggests that

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the problems regarding the architectural heritage conservation in Saudi Arabia with particular reference to earth or adobe architecture appears to be threefold. First of all, there are material problems whereby compatibility of contemporary requirements and ease of construction with the traditional materials such as mud-bricks, wood, mud-plaster etc. creates a major conflict. Also, competent and experienced masters of traditional techniques are unfortunately very scarce to be capable of applying appropriate techniques in restoring architectural heritage. Secondly, the prevailing attitude towards the past and traditional (Bedouin) roots creates significant cultural drawbacks regarding the conservation of traditional adobe architecture. In fact, even in the most traditional cores of Al Hasa region traditional settlements can still easily be sacrificed by demolishing in favor of new and contemporary constructions. Also, preference over the shiny, glossy and brand-new outlook (Figure 4) rather than the tactile feeling of the patina (Figure 5) brings along the artificiality of restoration and loss of authenticity and thus, time dimension of the identity to be preserved. Finally, the aforementioned two sets of problems are accompanied with another set of those regarding the philosophy of conservation. Here, the conservation is conceived as a mere visual matter rather than a tectonic issue. Thus, restoration of a piece of architectural heritage is usually reduced to replication of the outer (and most of the cases inner) skin discarding the structural concerns and issues of detailing.

Therefore, the paper is structured in three major parts. It starts with brief summary of urban and architectural history and characteristics of the area in regard to its urban-architectural tradition. Then, it introduces Ibrahim Palace, and gives an account of its brief history particularly focusing on the history of interventions and restorations. Finally, it focuses on the current issues and problems regarding the latest restoration process the palace have been going through.

II. AL-HASA, HOUFUF AND TRADITION OF EARTH (ADOBE) ARCHITECTURE

Despite lack of written sources, the following summary can be accounted regarding the evolution of settlement in Al-Hasa and Hofuf. Al Hofuf, also known as Hofuf or Hufuf, is one of the major settlements in eastern Saudi Arabia, named as Ash Sharqiyah (or Al Hasa) Province. Al Hasa is located in one of the largest oases in the world in which Al-Houfuf enjoys a tropical climate with only two seasons: a hot & dry summer and a moderate to becoming warm with occasional showers during cold winter. However, it is distant enough from the Arabian Gulf coast to escape the extreme summer humidity. Hofuf was the capital of the Eastern Province until 1953 and various parts of the old town still show evidence of when the Ottoman Empire controlled most of the area has several landmarks of its recent distinguished past. The agricultural date farms make Hofuf the largest oasis in Saudi

Arabia. Hofuf contains an old fort and one of the most interesting souqs in the Kingdom. Due to the sheer size of the oasis and the number of picturesque villages scattered through it, Hofuf stands out as a major cultural center in Saudi Arabia. On the eastern side of the oasis is Jebel Qara containing limestone caves named Ghar Al Hashshab, "cave of the arrow maker". The caves are very interesting, well-ventilated, and thus very cool and, by the same token, are quite popular in hot weather. There are potters Around the Jabal making simple unglazed pottery which enhances the cultural content. The city of Hofuf—one of the largest in the traditional Al-Hasa (or Al-Ahsa) district after the city of Qatif, is historically one of the primary centers of Shia Islam in Saudi Arabia and the majority of residents in Hofuf city are Shia. However due to the proximity of the Ghawar oil field and King Faisal University a large number of expats with various religious affiliations have moved in and around Hofuf which broadens the cultural richness of the city. Among the major architectural masterpieces within the city Ibrahim Palace can be named

III. IBRAHIM PALACE (QASR IBRAHIM OR QASER AL-QUBBAH), ITS BRIEF HISTORY OF RESTORATION

Although it is not very well documented, it is known that Qasr (Castle) Ibrahim was built during Ottoman rule in Al-Hofuf city (Figure 6). It was built in 1556 (963 AH) by Ali Ibn Ahmed Ibn Lawand Al-Burayki, the Ottoman Governor of the time (King, 1986). He also built the Al-Qubba Mosque, which still remains to present day (Figure 7). The Saudi Governor Ibrahim Ibn 'Ufaysan renovated the castle in 1801 (1216 AH). Therefore, various historians ascribe the castle to him. Qasr Ibrahim combines Islamic and military architecture covering an area of approximately 16,500 square meters. The mosque of al-Qubba which is built inside the fortification wall of the palace contains a large single dome. It is unique in the Kingdom in terms of its construction and style. The Ibrahim mosque is situated in the southwest corner of the Qasr Ibrahim, bordering the fortified city of al-Houfuf. According to its inscription above the main entrance, the mosque was erected in 1569-1570 (976 AH). Built of mud brick and stone covered with a local plaster, the mosque sits on an elevated brick platform within the courtyard of the castle. The south and west walls of the mosque are adjacent to the castle walls, while the north and east walls of the mosque remain open to the courtyard. These north and east walls are treated by a portico of pointed arches supported on large circular columns and roofed by a series of circular domes; some of these arches are decorated with circular lobes. The mosque has two outdoor mihrabs: one, within an undecorated pointed arch, is on the qibla side of the northern portico, and the second is located to the east of the mosque and it is freestanding. The mosque is accessed through two doors situated in the east and north walls. The main entrance on the eastern wall faces the qibla wall in the axis of the mihrab, and is distinguished from the northern entrance by incised plaster decoration depicting scrolls and geometric patterns on the arch intrados. The prayer

hall is composed of a single square space roofed with a dome supported on squinches each of which is topped by a small circular dome visible from the exterior. The qibla wall to the west is preceded by an elevated platform and holds an arched mihrab topped by a muqarnas semi-dome. Three built-in steps adjacent to the wall define the minbar towards the right of the mihrab. The prayer hall is lit by six ground floor rectangular windows flanking the two entrance doors and the mihrab on the qibla wall. Three more windows along the southern wall are rendered with no use due to the proximity of the castle's walls. Additional arched windows are located above the mihrab, above the entrance, and below the dome. These are covered with carved plaster mashrabiyyah screens. The mosque has a single minaret located at the northeast corner of the mosque. It forms a salient curvilinear feature within the portico. This is where its entrance is located. It more closely resembles Iraqi and East Arabian minarets, with its circular shaft that tapers slightly ringed by a muqarnas-supported circular balcony rather than the usual Ottoman style minarets. This balcony has a wooden balustrade and elaborate wooden arches that support the roof. The minaret ends in a slightly pointed dome decorated with a metallic crescent. These features, namely minaret and the dome, can be considered as the adaptations of Ottoman typology to the local typology. The castle has been renovated in late 1980s whereby significant damages were given to the authenticity of the architecture. Recently these damages are being retrenched through a comprehensive program of restoration activity that is being conducted throughout the palace. Nonetheless, there are still major issues being raised by this restoration program, as discussed at the beginning, regarding the very essence of the discipline of conservation. The next section will elucidate these issues giving specific examples from the restoration of the Ibrahim Palace.

IV. CURRENT ISSUES AND PROBLEMS OF ITS RESTORATION AND CONSERVATION

Ibrahim palace exhibits unique architectural features and represents typical characteristics of earth architecture [12]. All these features derive their formal characteristics from its aspects of structure, construction technique, material, climate, culture, social structure etc. Thus, these features emerge as a total entity integrating all the multi-faceted dimensions of this diversity of aspects. Therefore, it is not possible to consider neither its structures from its materials nor its construction techniques from its shape individually since these aspects are inseparable from each other. However, restoration applications demonstrate signs of some sort of segregation among this multiplicity of criteria.

For instance, Ibrahim Palace accommodates examples of the unique slab / ceiling system (Figure 8) typical of earth architecture in Saudi Arabia [13,14]. This system is traditionally based on the accumulation of floor layers starting from circular-sectioned wooden beams and a wooden grid

placed on top of these beam with 45 degree angle. Finally, a sheet of weaved reed is laid out on top of this grid and below the actual filling for the floor slab [15]. The ongoing restoration program, however, appears not to see any harm in combining this traditional technique with steel I-section beams under and above the wooden beams despite maintaining the original technique to a great extent throughout the building. Considering the fact that neither are distances to span with traditional materials like wood too long nor are there contemporary additions to the main building, introduction of steel into a mud-brick construction (Figure 9) which might have corrosion due to the water content in the mud resulting in its expansion and destruction of the integrity of the overall structure and eventually increase deterioration does not seem to be an appropriate decision. Moreover, the use of steel as the major structural element in restoring the roof slabs results in turning the traditional wooden layered system into a fake ceiling (Figure 10 a) whereby wooden beams, in these rooms, are replaced by exposed steel beams to carry the wooden grid and the reed mesh above it, which creates an awkward appearance (Figure 10 b).

Another salient feature of this type of architecture is its traditional plaster content of which consists of mud and straw [16, 17]. The current restoration undergoing in Ibrahim Palace, however, also introduces the use of cement and gypsum plastering rather than mud plastering on the exterior (Figure 11) at certain parts of the palace although the possibility of its use being chemically inconvenient [18] is quite high. As figures illustrate, it is intended to be covered with mud plaster as the final veneering layer. However, such interventions also may cause breaching the main principles of authenticity and honesty [19] in the field of heritage conservation.

Another characteristic element of earth architecture from Saudi Arabia is the façade gutters made of the trunk of palm trees. Again, the ongoing restoration seems not to have any apprehension regarding the abrupt insertion of plastic rainwater drainage pipes (Figure 12) into the main body of the wall from the exterior at the peril of not only the mud plaster but also the integrity of the mud. This type of interventions are obviously conducted mainly on the basis of pragmatic requirements of the immediate material problems yet with no significant attention paid to the cultural dimension of the role of architectural feature in the formation of the heritage and its conservation as an asset to be transmitted to future with correct information associated with it. Instead, these pragmatic issues could be solved with more study and emphasis on the cultural dimension. Should conventional and genuine techniques of construction are insufficient to solve the problems of the deteriorated building and such contemporary interventions are unavoidable, therefore, fully necessary then

they could be implemented in such a manner that these contemporary additions are concealed within or in between the skins so that they could become clearly legible as 'later additions' particularly when excavated by forthcoming generations for further interventions assuring the continuity of its conservation in the future.

In addition to the technical issues as discussed above, the methodological and systematic character of survey and documentation of the process of restoration also raises concerns regarding the scientific nature of the restoration program being conducted in Ibrahim Palace. All these indications give the impression of an approach that can be defined as restoration *per se* and as conservation purely for pragmatic needs rather than for the purpose of cultural responsibility.

V. CONCLUSION

Consequently, restoration of the Ibrahim Castle in Houfuf represents typical problems regarding the understanding of conservation of architectural heritage in Saudi Arabia. Despite the affirmative intentions to preserve history and culture, some concerns regarding materials and techniques of traditional construction seems to be ignored or neglected in various points. Hence, as it is discussed above, the resulting architectural work ends up with a loss of patina, and total replacement of old features and components with their brand new replicas.

In regard to material issues, the following could be emphasized. Especially, considering the fact that not only distances to span with traditional materials like wood are not too long, but also there is no contemporary addition, introduction of materials like, steel, wire-mesh, cement based mortar etc. which might deteriorate in reaction with the water content of the mud can be harmful to the overall structure in the long term. On the other hand, from a historical (*and perhaps a more significant*) point of view, such a mix can be crucially misleading or falsifying for future researchers. Should such interventions are unavoidable, and therefore, fully necessary then they could be deployed in such a way that they are concealed within or in between the skins so that they could become clearly legible as later additions when excavated by forthcoming generations for further interventions assuring the continuity of its conservation in the future.

Consequently, as discussed throughout the paper, the problems, or rather, the background behind these problems are threefold; material, cultural and philosophical, and the latter two appears to be leading the former. Thus, Ibrahim Palace restoration shows signs of a prevailing attitude towards heritage. Along this line of thought, conservation in Saudi Arabia and earth architecture in particular displays a remedial

character. Therefore, the major problem seems to lie within the acute lack of distinguishing of preservation of the original or conservation of the genuine from copying or replicating its image only without intrinsic components associated with it. That is to say, there is a tendency to reconstruct appearance no matter what without understanding and elevating the status of its knowledge value, historic value or dimensions of construction material or technique. However, it should be taken into account that not only images are temporal but also next phases of intervention in future will take this image based end product as the basis of conservation and point of cultural reference from the past. Such a gradual distortion might cause the focus of conservation to shift from architectonic culture to image treatment or skin cosmetics. Unavoidably, this means that a type of Lamarckian evolution will take place in time taking the heritage to a totally irrelevant point. And eventually, dissociation between the culture and its material aspects will occur, which is a major conflict with the very essence of conservation.

Nonetheless, Ibrahim Palace restoration can still be praised as a significant attempt in the establishment and development of conservation at its early stages in Saudi Arabia. It certainly sets a precedent and enables the discussion of issues regarding the establishment of the standards of restoration and conservation of architectural heritage. In sum, it is appropriate to suggest that problems regarding to conservation of architectural heritage in Saudi Arabia is rather socio-psychological, cultural and perceptual rather than material with particular reference to adobe architecture in Al-Hasa.



Fig. 1. Earth architecture in Houfuf (Qasr Ibrahim, Al Hasa region)



Fig. 2. Traditional materials of earth architecture



Fig. 3. Ibrahim Palace in Houfuf (exterior view)

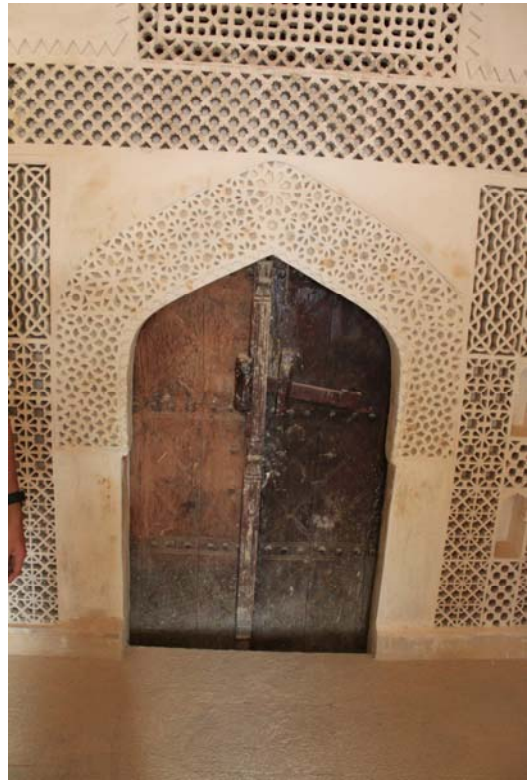


Fig. 5. Patina as the traces of time over the architectural features



Fig. 4. Loss of patina through insensitive restoration applications



Fig. 6. Ibrahim Palace in Houfuf



Fig. 7 Ibrahim Mosque



Fig. 12 Insertion of plastic rain pipes next to traditional wooden gutters



Fig. 8. Traditional roof construction



Fig. 9 Insertion of steel structures into traditional techniques of construction



Fig. 10. Steel beams and its relation to traditional construction methods



Fig. 11. Use of mortar in restoration

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